By the same Authors

"THE BOMBAY PLAN—A CRITICISM"

"FIVE YEAR PLAN—A CRITICISM"

(POPULAR BOOK DEPOT, BOMBAY)

OUR ECONOMIC PROBLEM

BY

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PREFACE TO THE FOURTH EDITION

Since the publication of the third edition in 1948 the book was reprinted once to meet the increasing demand. The need for a fresh edition now enables us to completely revise the volume in the light of the momentous changes that have taken place in the post-war years. We have also dealt with the inauguration of the Five Year Plan. The brief discussion of developments in India between 1945-48 given in the preface to the last edition has been incorporated in the body of the present edition.

We have in this edition drawn upon the official publications of the States and Central Government, as well as those of the U.N.O. and the Food and Agricultural Organisation. We have also been indebted to recent specialised studies by Indian and foreign authors. Our obligations to all these publications have been acknowledged in the text. We are specially thankful to Mr. D. N. Marshall, of the University Library and his staff and the staff of the University School of Economics Library for placing at our disposal all the available material in the shape of books and journals, and for their unfailing courtesy and help despite our very heavy demands on them. We also thank all our friends, particularly Mr. Y. S. Pandit, who have helped us by loaning books and journals.

Despite all recent developments including the Five Year Plan the fundamental problem of our country remains unchanged. We have not, therefore, found it necessary to change the general structure of the book. In this revised edition we have attempted to give available figures for the Indian Union and have stressed the post-war years, especially the years after Partition. Various sections have been entirely rewritten. In a new chapter on Economic Planning in India we have discussed the concept of planning and appended a brief summary of the Five Year Plan to enable readers to follow subsequent discussions. In this connection it is gratifying to find that our plea for planning made in the earlier editions has already been recognised and become an accepted fact, though not quite on the lines we advocated. We have, therefore, stressed in this edition the problem from the point of view of the under-developed character of our economy. We would urge, moreover, the imperative need of working out the assumptions and theories suited to under-developed countries. Western economic theories and models are not applicable in their entirety to these countries, and planning on Western lines would

accentuate rather than solve the problem. Blind imitation of Keynesian prescriptions would not be helpful. In this connection we would like to call attention to Dr. V. K. R. V. Rao's paper on "Deficit Financing, Capital Formation and Price Behaviour in an Under-developed Economy."

The chapters on rural debt and finance have been recast under different headings, and the chapter on Farm accounts and Family Budgets has been omitted, though some of the material on family budgets has been used in a later chapter. The last chapter has been substantially changed to discuss the principles of planning for under-developed countries.

We have made use of all up-to-date information. In some cases where the relevant reports are not yet available, e.g., the Census Report, Part I B and the final report of the National Income Committee, we have been forced to rest content with existing available material. We have met with tremendous difficulties in procuring copies of publications even after their official release, not to mention inordinate delays. Ready access to information by members of the public is one of the essential factors in the successful working of democracy, and apathy in this direction weakens public co-operation which is so much needed when our country is planning for a more prosperous and better order of living for its citizens.

Since the last edition, the world has witnessed momentous changes—not the least among them being the emergence of new China under communist leadership, the intensification of the cold war and the discovery of the hydrogen bomb. This ancient country lying dormant, disunited and weak for a number of centuries has reawakened into a strong and united nation. The successful revolution, even more significant than the Bolshevik Revolution of 1917, has led to a radical change in the international situation. The refusal to recognise in 1917 the Bolshevik Regime has had regrettable developments of which the end is not yet in sight, and the refusal today to recognise New China and bar its entry into the U.N.O., for reasons into the merits of which we do not propose to enter, may bring about developments even more regrettable. The lingering vestiges of colonialism have not yet disappeared and seem to be fighting in vain against the trend of history that points to the disappearance of the old Asiatic political order.

Much of the valuable work of international organisations has been hampered by the cold war strategy; and resources which

might otherwise have been devoted to the social and economic reconstruction of the world have been diverted to armaments. Mutual distrust and lack of understanding continue to mar such hopes as were entertained at the end of the last war about the permanent establishment of peaceful relations, and we are compelled to repeat what we said six years ago: "We might witness—we hope not—a more dismal and tragic failure on the part of this ambitious successor of the League of Nations; for the old world imperialist outlook does not seem to have been abandoned, and power politics still seem to rule international relations."

In India we have launched a Five Year Pan, but we are faced with difficulties as a result of continuing tension with Pakistan and suspicions of Western Powers due to our policy of neutrality. Deficit financing, which is now becoming inevitable, will involve a radical change in the economic policy adumbrated by the Plan. But the greatest obstacle in the way of successful implementation of the Plan is the lack of a civic sense and the growing gulf between preaching and practice. If the masses who live on submarginal standards are to be galvanised into enthusiasm in the working of the Plan, a requisite atmosphere has to be created not by slogans and verbal exhortations, but by the practice of simple modes of living and sacrifice from those to whom the masses look for leadership. The administrative structure is growing more top-heavy and more expensive for a poor country like ours under our own rulers than it was under British rule. To crown it all, the spirit of separatism is abroad, strengthened tremendously in recent years. The lack of a co-ordinated policy that has resulted from the conflicting outlook of the Centre and the States threatens to destroy whatever might have been achieved by a far sighted and single-eyed Plan.

But even if we achieve the goal that we aim at in our Plans by overcoming all obstacles, shall we not remind ourselves that life is more than bread, that history has no golden age we can recapture, nor that mere increase in production is "progress," that such "progress" means only the domination of things over spirit? Cant phrases about the glorious traditions of the past will not help us—nor even the comfort and leisure produced by mechanical devices give us the peace that passeth understanding. We shall find only what we seek—Let us seek only what is worth seeking, and leave the rest to God. Otherwise we shall pride ourselves that the standard of life has risen, we shall point to electrical appliances and motor cars and the rising expectation of life as in-

dices of our well-being. Well-being is not survival; for we may kill with modern science as many as survive. We share the life of the cosmos—the welfare of our brothers is part of our well being. The hope for separate survival is unreal in a world where our daily lives bring us to share in a life that far transcends the limits of our bodies.

173, J. TATA ROAD,
BOMBAY, 1.
September, 1954.

P. A. WADIA
K. T. MERCHANT

PREFACE

The title of this volume is intended to stress a fact which is too often overlooked by those who are concerned with the economic life of our country, or who happen to write about it. We are concerned in this work with "our economic problem"—a problem which is one and indivisible—the problem of our poverty. We have endeavoured throughout this volume to avoid that compartmental view of economic life, which offers a ready solution for each of its aspects without reference to its bearings and reactions upon others. We have likewise stressed the fact that the welfare of our country is determined not merely by the healthy functioning of its economic institutions, but requires a well-adjusted and harmonious growth of our social, political and cultural institutions. Ultimately, the various economic problems of India merge into the fundamental economic problem, which it has been our purpose to explore and expound here, of removing the causes of poverty and raising the standard of life of the people, so that the freedom and leisure which may ensue may enable them to make their cultural contribution to human civilisation.

We have dealt in the present volume with problems connected with our production, distribution and consumption. We hope in future to deal with the problems of our trade and transport, currency, banking and finance in a companion volume.

It is hardly necessary to mention that for the factual data in this work we have, of course, drawn upon the various statistical publications of the Government of India and upon the reports of the various commissions and committees appointed by the Government of India and by some of the Provincial Governments from time to time. We have also utilised the publications of the League of Nations, especially for comparative purposes. Our obligations to authors of specific studies, Indian and foreign, have been acknowledged in the text. However, special mention may here be made of our debt to the works of Drs. Buchanan, Radhakamal Mukerjee and Gyan Chand, Professor B. P. Adarkar and Mr. N. Das. We record here our general debt to these and other authors whose works have been of help to us.

We cannot omit to express our sense of gratitude to Professor J. J. Anjaria for the readiness with which he has helped us by reading through the entire manuscript, in spite of heavy pressure on his time, and offering valuable criticisms and suggestions,

some of which we have incorporated in the volume. It is not necessary to add that he is in no way responsible for the views and conclusions embodied in this work. We are also grateful to Mr. G. N. Joshi, Advocate, for having helped us with suggestions in parts of the volume.

We are thankful to the Librarian of the Bombay University, Dr. P. M. Joshi, and to his staff and particularly to Mr. A. M. Narvekar, for placing at our disposal all the available books and journals, to Professor C. N. Vakil for giving us facilities for the use of the School of Economics' Library and to the Secretary of the Indian Merchants' Chamber, Mr. J. K. Mehta, for giving us access to the Chamber's Library. We also thank all other friends who have helped us by lending books and journals.

In closing, we may add that we have never deliberately allowed our desire to seek the light to be subordinated to any preconceived notions or prejudices. We send forth this volume in the hope that it may stimulate thinking, that it may inspire those who read it into that creative imagination which rises above all parochialism and vested interests.

BOMBAY,
September, 1943.

P. A. WADIA
K. T. MERCHANT

PREFACE TO THE SECOND EDITION

We are gratified at the enthusiastic response from the public to our book. In bringing out a revised edition within the space of a year and a half, we have made no radical changes in the layout or the treatment. The events of the last eighteen months have given added strength to most of our conclusions, and confirmed us in the view that the capitalist organisation which has gripped us will not solve any of our problems, much less the problem of poverty. We have made certain additions in places; we have brought the chapter on the growth of industries up-to-date; we have stressed certain aspects of the labour problem and especially the relations between wages and profits. To increase the utility of the book, we have made relevant references in the text to the various plans recently placed before the public, and added an appendix on Economic Planning in India which includes a brief summary of the Bombay Plan and People's Plan.

We are thankful to all those of our readers who were kind enough to bring to our notice misprints and typographical omissions which have been corrected in this edition. We also take this opportunity to make amends for the omission in the preface to the first edition of the name of Dr. V. K. R. V. Rao on whose writings we have drawn in some sections of our book

We hope, finally, that the limitations on the circulation of the volume to a wider public outside India which the war has imposed may soon be removed, so that it may in its own way contribute to that better understanding of our country's economic problems which is the basis of the establishment of peace and goodwill between the nations.

Hormazd Villa,
Cumballa Hill,
Bombay.
March, 1945.

P. A. WADIA
K. T. MERCHANT

PREFACE TO THE THIRD EDITION

Since the publication of the second edition in 1945, the continuous demand for the book has led to two reprints. As the book is now out of stock, and there is a pressing demand, we have thought it desirable to bring out a new edition. We have taken advantage of this opportunity to introduce relevant modifications and changes in the next, without disturbing the general structure of the book. We have, as far as possible brought the figures up-to-date. Separate figures for the Indian Union and Pakistan are not yet available. The fundamental problem of both the dominions remains unchanged. We feel warranted, therefore, in retaining the title "Our Economic Problem." On the advice of English friends who found the book instructive and interesting, we endeavoured to bring out a foreign edition in England and America; but we did not succeed, as the foreign firms were unwilling to take up a publication whose first edition was brought out by an Indian firm, and desired, moreover, to sell the edition in the Indian market. As this would have been unfair to our publishers in India, we had to give up the idea of a foreign edition. We hope, now that export restrictions are removed, there would be less difficulty for foreign readers to import copies from India, and that our work will lead to better appreciation and understanding of our problems.

Momentous events have happened in the world as well as in India during the last three years. The discovery and the brutal use of the atom bomb on Japanese cities ended the second world war in the East a few months after the end of the war in Europe.

Though more than three years have passed since the war ended, we have not yet realised the peace for which the nations of the world have been longing. On the contrary the rivalries and jealousies which were buried during the war have sprung up again. We find the world divided into two camps,—two blocks,—two ideologies, the Anglo-American and the Soviet. The dream of a new world order, Wendell Wilkie's "One World," has been shattered, in spite of the great advance of leftist forces. England has a Labour Government in power. In France and Italy the leftists have won major victories. Everywhere there is a turn of the tide in favour of the "left." Though attempts are being made to evolve an international organisation, the United Nations Organisation and its offshoots, the achievements fall far short of promises. In the economic field, the Food and Agricultural

Organisation, full of promises in the earlier stages, has been frustrated in its efforts due to lack of co-operation on the part of many of the governments that had joined the organisation. There has been profiteering on the part of countries with surpluses, at the cost of others suffering from scarcity. The authority of the International Monetary Fund was flouted by the French Government. The International Bank for Reconstruction and Development gave loans, not on grounds of need, but of political considerations. We might witness—we hope not—a more dismal and tragic failure on the part of this ambitious successor of the League of Nations; for the old world imperialist outlook does not seem to have been abandoned, and power politics still seem to rule international relations.

The second world war has definitely witnessed increasing development of the role of the state in the economic sphere; and however great might be one's faith in the magic of private enterprise, as exhibited in the pathetic self-deception of Indian capitalists, the days of *laissez faire* are ended. Every country has had to give up its *laissez faire* traditions; and the world is now entering on a new phase of capitalism—controlled or planned capitalism. To what extent this new expedient will give a new lease of life to capitalism, by overcoming its basic contradictions, the future alone can tell. Economic restrictions of all sorts are growing, and free trade is still far off in spite of the face saving formulae evolved in the deliberations of the International Trade Organisation. Nationalism has caught in its grip all Asiatic countries including the colonial dependencies, and has brought in its train economic nationalism.

European economy has been shattered due to the devastation caused by the war. England deprived of its £5,000 million investments has to follow an austerity plan to keep up its standard of living. Only America has emerged from the war an economically stronger nation, having improved her productive capacity to the extent of 50 to 75 per cent on the pre-war level. With the abandonment of wartime controls, prices have been rising, and there are fears of a runaway inflation in America, and an economic crisis, unless, as in 1939, a new war comes to the rescue of the capitalist system.

Events in India have been no less momentous. We have won our independence from the 15th August 1947, but at the cost of dividing the country into two dominions—the Indian Union and Pakistan. Partition has brought in its wake the holocaust of

organised murder, loot and arson—a destruction unprecedented in our history. Millions of refugees have to be given a shelter and settled in an already over-populated Indian Union at a time when the country's resources are also drained by a war in Kashmir. The preoccupation of our national government with these problems has slowed down the pace of economic development, and prevented the immediate implementation of a number of plans. Substantial achievements, however, in spite of those difficulties, must be laid to the credit of our government in the past year.

* * * * *

The Report of the Economic Programme Committee, appointed by the A.I.C.C., laid down as the objective of industrial policy a quick rise in the standard of living of the masses of the people and the achievement of a national minimum standard within a reasonable period, which they said should not be less than Rs. 100 p.m. in large urban areas for a family of average size. A parallel aim of industrial policy would be to afford opportunities for full employment to every individual, which would draw out the best in him for service to the community and for the development of his or her personality. To raise the standard of living the Committee thought it necessary to bring about equitable distribution of existing income and wealth, and suggested a ceiling for incomes "which may not exceed Rs. 4,000 p.m." and should be brought down by successive steps to Rs. 2,000. New undertakings were to be started under public ownership—particularly key industries and public utility concerns, as well as undertakings in the nature of monopolies. The transfer of existing undertakings from private to public ownership was to commence after a period of five years. In private industry the existing system of managing agency was to be abolished, and dividends on employed capital were not to exceed 5 per cent. The surplus profits were to be shared between the workers and the shareholders in proportion to be fixed by Government. A part of this surplus might be earmarked by Government for schemes of social welfare or industrial improvment. There was to be co-ordination between large-scale and cottage industries; and regional self-sufficiency was to be the aim with regard to all types of industries.

If these recommendations can be implemented by a comprehensive planned policy, there is no doubt that we shall be launched on the path of a Socialist society.

Upon the mere publication of this report a deputation of nine leading industrialists waited upon the Prime Minister to convey their apprehensions about the recommendations of the Committee; and assurance was given to the industrialists that no precipitate steps would be taken by Government that would adversely affect the country's industrial production. Sometime later a resolution was moved in the Central Legislature by Kazi Syed Karimuddin, "that the economic pattern of this country shall be Socialist economy based on the principle of nationalisation of key industries, and co-operative and collective farming, and Socialisation of the industrial resources of the country, and that the Government of India shall adopt the said principle immediately." This resolution was opposed by the Prime Minister who observed that the immediate problem was that of increasing production. "In the attempt to change the economic system," he observed, "a new productive apparatus might be built up, but for the moment you break down the existing apparatus, and that is obviously undesirable at any time, much more so when all our energies have to be concentrated on production."

* * * * *

On the 6th April, 1948, the Government of India issued a resolution on their industrial policy. It is a half-way house, an attempt to reconcile the conflicting claims of private enterprise under capitalism and of a socialist order. It is curious that whilst arms and ammunition and the ownership of Railway transport are to be nationalised, aircraft and ship building are still to remain in private hands. A ten years' lease of exploitation and profiteering is guaranteed to them. The textile industry which has excelled all others in profiteering is only to be regulated and controlled by a Government that issues orders for control, and a few months later for decontrol, and still later for recontrol. The Prime Minister addressing an A.I.C.C. meeting on 25th April 1948, observed:

"The production technique and the production apparatus are rapidly changing, and the present methods of production are becoming out of date and obsolescent. If that is so, a far seeing Government does not expend its resources on acquiring industries which are bound to become obsolescent. On the other hand, it would devote its resources to developing industries of the very latest type... Nationalising all existing industries would swallow all our resources, and the industries would be completely out of date a few years hence." The Prime Minister,

in another connection, talks of the "poetry" of planning to be replaced by the "prose" of policy. But he likewise gives a warning to capitalists. We shall "give them a fair field, a fair chance and a fair profit." If they do not take advantage of this and are still afraid, "then somebody else has to do it. There cannot be a vacuum."

* * * * *

In conclusion we would like to stress the tremendous change in our economic outlook that has taken place since 15th August 1947. We are now the masters of our own economic destiny; we can no longer conveniently blame foreign rulers for sins of omission and commission. Finance capitalism has made great strides in our country in the last few years. There has been considerable accumulation of money in the hands of a few, and consequently the concentration of control. The few trusts that dominate Indian economy have been strengthened by their partnership with foreigners. There is the added danger that a good proportion of our industries have passed into the hands of speculators: we have witnessed in these last few months the wholesale buying and selling of insurance companies.

Over and above these ominous tendencies there are the gathering clouds of inflation. Government have already admitted that the decontrol policy has failed in its objective. The reasons are obvious,—the greed of our businessmen and industrialists and the lack of co-operation on the part of the public.

What about the future? The vicious circle of rising prices and wages must be broken at some point; else we may repeat the history of Austria and Germany in the nineteen twenties and of China in our own times. The present crisis must be met. Our Government is working against heavy odds and cannot succeed, unless there is wholehearted co-operation on the part of all—capitalists, workers and the general public. Now that we have a Government of our own, there is no longer any excuse for withholding co-operation. We should remember that Rome was not built in a day. But the zeal for hastening slowly need not stop us from taking the necessary measures. What we are lacking in, and most need, is a sense of civic duty. We need to subordinate our personal interests to the interests of the country. We need to evolve an all India Union plan and policy. We need to guard ourselves against recent trends in the direction of separatism and provincialism—whether this provincialism takes the

form of cultural, linguistic or regional lines. Above all we need to build up a strong and sound national character of which there are not many signs at present. Without this, what hope is there for the future?

Bombay
September, 1948.

P. A. WADIA
K. T. MERCHANT

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CHAPTER I

INTRODUCTION

There is no word so frequently used in economic literature during the last thirty years as the word "planning." It has been looked upon as the panacea of our age. Economic activity of any kind involves some degree of planning. To plan is to act in the light of a definite objective or purpose—every purposive activity is a planned activity. National planning was first brought to the notice of the world by the Five Year Plan in the Bolshevik Regime—though there was nothing new in it. Town planning was a phrase long familiar—and national planning was an extension of town planning, going beyond town planning, not only in the reach of its activity, but in the variety of activities that it embraced. It stands for a political philosophy which is the antithesis of *laissez-faire*. Every organised society involves planning—some degree of co-ordination of individual activities, some limitation of the freedom of the individual. The planning of our own times in the first place involves governmental control of production—but it has to be recognised that it cannot end with control of production. Such planning must inevitably affect other aspects of our national economy and must ultimately react on our social and political life, as these in turn determine the planning of our economic activities. We have talked in terms of the planning of our national life in the following pages, but we are fully conscious of the fact that successful planning of the national life of any country is intimately linked up with international goodwill and co-operative planning.

Breakdown of Laissez-faire

19th century liberalism involved an attempt to develop an economic policy based on the absence of government interference Enlightened self-interest working under a system of free competition was supposed to bring plenty for all, to benefit the consumer by the lowering of costs, and to secure increasing satisfaction of all human wants which economic goods and services could satisfy. Government control was deemed superfluous, if not injurious. Liberalism, however, did not fully succeed in the establishment of a satisfactory organisation. Modern industrial society has created in Europe and America institutions which are quasi-monopolies; and though land may be more evenly distributed, industrial concerns with their huge amount of fixed capital have tended to become national and international monopolistic holdings. *Laissez-faire* was accepted on the grounds

of supposed benefits resulting from perfect competition; and consequently, wherever monopolistic capitalism prevailed, intervention by Government became inevitable. Price control of some kind, the assumption by Government of monopoly concerns like railways and other means of communications, limitations of profits in public utility concerns, protection of industries by imposition of custom duties—these measures among others have marked the industrial society of our times. *Laissez-faire* has been increasingly replaced by state regulation and state management.

The World War of 1914 and the subsequent period of dislocation of the entire social and economic structure necessitated what was virtually a policy of more or less state regulation for most countries. Throughout the period the scarcity of commodities and the necessity of rehabilitating the economic system compelled some governments to resort to a policy of planning, involving price control, rationing of food and clothing, conscription of labour for military and civilian purposes, and organisation of the entire productive resources of the country for the successful accomplishment of a definite objective.

1919-39

The post-war period saw the development of a large variety of economic experiments. Parliamentary government on a democratic basis was discredited, mostly due to the conflicting economic interests of party groups, who made unholy alliances and unmade them, according to their short-sighted views of national interests. The confusion and dislocation which followed in the post-war period intensified the economic competition between nations. The rise of Socialist Russia led in other countries to a new type of governmental experiment in the form of Fascism—largely a political manifestation of monopoly capitalism in crisis. The masses were lured into a support of Fascism by the lavish promises of an 'autarky' to solve the post-war economic problems. Under the name of national socialism a planned economy with war as its objective was set up in Germany and elsewhere. In Soviet Russia a highly centralised government demonstrated the possibilities of a planned economic development in a new order based on the abolition of private property, and on the transformation of its subjects into the zealous servants of society. Elsewhere as in America control of prices and credit control, piecemeal as they were, marked the trend of a new age when governmental interference in economic

affairs, far from being regarded as a violation of economic laws, began to be recognized as an indispensable method of increasing economic prosperity, diminishing unemployment and making nations rich and contented.

It was the economic depression that commenced in 1929 that offered in the U. S. A. a challenge to its economic organisation compelling the Government to abandon its policy of non-interference, and to enter on a New Deal—a bold programme of public works through loans—which provided jobs, created new purchasing power and saved from degeneration through unemployment the character of its citizens. We cannot help observing that state regulation in the U. S. A. within the structure of the competitive system led at times to practices like the deliberate destruction of goods and services in order to prop up prices. A variety of international restrictive schemes curtailing the production of cotton, wheat, sugar and rubber were indicative of the half-hearted measures of regulation which one might well characterise as anti-social in their effects; for we cannot forget the fact that, when wheat and coffee and cotton were destroyed, there were millions who were in want of food and clothing. In such a rapidly changing environment, such as that which marked economic life in the post-war period, institutions could not remain unaltered. Nations all the world over were gradually realising the effectiveness of government ownership and control over the tools of production and distribution as compared with private enterprise and a *laissez-faire* attitude. It was likewise the depression which started in 1929 that made a country like Great Britain abandon its policy of free trade in favour of Imperial Preference, aiming for the first time within the orbit of the Empire at what the old Mercantilism sought to achieve in the purely national field. This policy was progressively extended after 1931, bringing even a reluctant India within the orbit by the arrangements made at the Ottawa Conference.

In brief, the period from the end of the first world war, and particularly the depression and post-depression periods, saw the rapid development of collective or state regulation or control of economic activities. It started from protective tariffs for fostering industry and agriculture and subsidies to exports, and was gradually extended to the control of all domestic production, to the prohibition of certain types of imports, to the limitation of imports under a quota arrangement, to the planning of the capital market by control of investments at home and

abroad, the regulation of the purchasing power of money and of the foreign exchanges, and restriction of migration.

The outbreak of the war in 1939 led to the organisation, in however halting a manner, by the state of all the available resources of each of the belligerent countries—in the shape of raw materials, labour, capital, credit and foreign trade—for the single purpose of ensuring victory in a total war. This organisation was not confined within each country as a separate compartment, but had to be carried out on an international scale on a co-operative basis. The necessities of war forced once again reluctant nations, hitherto thinking in terms of economic self-sufficiency, to think and act in terms of a larger world of inter-allied nations in which all economic activities were to be co-ordinated by a central organisation.

In spite of the pressure exercised by the course of events on these individualistic countries, rumblings and protests were not inaudible that profiteering by individuals had weakened the war machine and undermined the efforts of co-operation. The hope for humanity in the future lies in the increasing realisation by the nations of the necessity for retaining, improving and systematising, in times of peace, the halting methods of planning that they were compelled to adopt in times of war as the only medium of survival and escape from destruction.

The theory of free trade was based ostensibly upon the economic law of production at the minimum cost. This law was supposed to be a result of economic competition leading to international division of labour. But economic competition sharpened by the mad pursuit after profit led to a scramble for capturing of markets and colonies, and political domination of the backward countries by the economically advanced countries. The drive towards 'autarky' during the inter-war period was not prompted by a desire for national self-sufficiency for its own sake, providing necessities to one's own people, but by the desire to avoid dependence on foreign supplies of foodstuffs and other vital things which might endanger the country's safety during war. There was also the desire to strengthen one's capacity for competition for markets and to get political domination in the under-developed and undeveloped parts of the world, within the frame-work of the capitalist structure. Only one country was an exception to this, namely, Soviet Russia.

When we consider the economic order in the period 1919-39 —a departure from free trade—as partly responsible for the

insecurity that prepared the stage for fresh wars in the world, we are not favouring a free trade regime that is based upon the principle of competition for securing sources of raw materials and markets for manufactured goods. This so-called free trade has always been a one-sided affair which has resulted in inequitable division of labour, condemning the economically backward countries to a perpetual 'hewers of wood and drawers of water' status.[1]

When we plead for relative economic self-sufficiency for India, it is with a definite objective of securing a decent life for our countrymen, without any idea of preparation for a war either economic or political, as has been frequently the case in other countries. In our own days, since economic goods, specially food has become a political weapon, self sufficiency in food becomes an essential factor in the preservation of independence.

Economic Policy under British Rule

If we turn from the trend of economic policy in the rest of the world to the trend of events in India, the one salient characteristic of our economic life during the past 100 years has been a persistent adherence on the part of Government to the *laissez-faire* traditions of the last century. In agriculture, for example, whilst the Dominion Governments adopted a definite policy of agricultural development during the last 50 years and accelerated the rate of agricultural exploitation by transportation facilities, a liberal land policy, effective credit institutions, a well-planned system of popular education and Government help to marketing schemes for export, India, where three-fourths of our population are dependent on agriculture, continued its old world methods of cultivation. The Government had failed to provide so far adequate facilities for marketing and finance; there was very little of popular education, and still less of agricultural education. India continued to remain a land of uncertain crops, and of economic development without a definite national objective.

In reference to non-agricultural production, after a hundred years of British Rule, industrialism and large-scale production may be said to have touched only the fringe of Indian life. In the West the significance of the Russian experiment lies in the

[1] Cf. "Of China's working population 50 p.c. has been kept in the mines or in the fields. In China 80 p.c. of the working people are agricultural, in Thailand 80 p.c., in the Netherlands East Indies 70 p.c., in Burma 70 p.c., in Indo-China 80 p.c. in most of Africa the proportion is even higher." ('Make This the Last War' by M. Straight p. 31).

fact, not that industrialisation under state organisation has been forced on at an unprecedented pace, but that this is being done with a view to adjusting production to consumption. In other countries where capitalism has played an essential part in the development of industrialism in the last century, the incentive of private profit and individual enterprise were associated with the growth of production. A *laissez-faire* policy was the natural outcome, glorified by economic theory as the solvent of all ills and the foundation of all prosperity. But the industrialism of the last 50 years, with its restriction of production, its wanton destruction of commodities, its paradox of poverty in the midst of plenty, has made the continuance of *laissez-faire* policy impossible. Industrialism has now reached a stage when systematic planning and centralised control are necessary both for the purposes of production and equitable distribution.

Industrial Development under British Rule

What it may be asked, about our own industrial development? The traditions of a *laissez-faire* policy which had promoted British prosperity in the 19th century were brought to bear in our country. It was not till the beginning of the present century that the first signs of planning, if it could be called planning, appeared in the form of the demand for protection. Credit and banking are in primitive condition except for the establishment of a Central Bank, whose control was vested in an agency that was not yet fully identified with national interests. Speaking on the question of the war time development of Indian industries in December, 1942, Sir M. Visvesvaraya observed: "Government have no policy or plan, no unified conception of what they are doing or what they propose to do in a matter which gravely affects the purchasing power of the 400,000,000 of our population." The economic development of India in the past 40 or 50 years is difficult to describe in an accurate manner. There was a complete lack of a consistent policy. The policy of discriminating protection of Indian industries, as it was adumbrated by the Fiscal Commission 30 years ago, had hardly been followed with consistency. The Fiscal Commission thought in terms of a world governed by free trade. Their recommendations were based upon the infant industry argument and the possibility of protected industry being able to dispense with protection within a limited time. They did not, and perhaps could not, take account of the forces that were making for economic nationalism after 1919. The loans given to European countries for resuscitating

national currencies were used for continuing subsidies to national industries. They could not have realised that the forces that made for economic reconstruction after 1919, and that made some people hope for a return to the pre-war system of international free trade, were swamped by the desire for economic self-sufficiency, necessitated by the period of depression and the ardent preparations for another war.

The first world war gave plenty of opportunity for the industrial development of India. It revealed both the potentialities and deficiencies of Indian industries. It was difficult, however, for India to take full advantage of a temporary protection given by war as she had to depend for plant, machinery and accessories on imports from abroad. Thus in a world dominated in the inter-war period by preparation for war and the desire for self-sufficiency Indian development could only achieve the displacement of a few imported commodities by goods produced at home. There was no attempt at securing harmony of economic development, no vision of the possibilities of developing production goods like machinery and chemicals, no thought of using these production goods for the expansion of our agricultural potentialities, so that with a rise in the standard of living our people could live a fuller and richer life.

Hence, the outbreak of the second world war again found us unprepared for utilising the vast opportunities offered to us by the war to develop our industries. The absence of key and basic industries like chemicals and metallurgy—which was commented upon by the Industrial Commission in 1919—again stood in the way of our development. The Grady Mission that came out to India in 1942 found that India's magnificent metallurgical resources were unused, and that the Indian industries that had been developed were operating largely on a business-as-usual basis, and that no Government agency existed to convert them to war work.[1] Australia and Canada were able to exploit fully the opportunities offered by the war, and established a number of new industries, while we were content to follow the traditional policy throughout, due to the lack of a well-conceived plan and a definite national objective. Not only that, but we risked also the danger of losing the larger perspective of the future by following a short-term narrow policy devised from day to day under the pressure of war requirements.

Post-War Planning

In the midst of the second world war the British Association

1 M. Straight. op. cit. p. 32.

for the Advancement of Science arranged a conference for Science and World Order which met in London in September, 1941. The key note of this Conference was the application of scientific knowledge to the solution of vital problems that face the world, and above all to the solution of economic problems. Mr. Maurice Dobb, a Cambridge Economist, described planning, at the Conference, as a mechanism for eliminating the uncertainties and fluctuations of economic activity which form an integral part of an individualist economy. Whilst there were a variety of interpretations as to the scope and objectives of planning, it was generally recognized that the utilisation of scientific knowledge for the advancement of economic welfare cannot be achieved in a muddled and planless world in which mankind were in social and economic conflict. It was also pointed out that the problem of planning was not a technical problem of organisation, but one of getting agreement as to what benefit to humanity means, and also of overcoming the fact that people are more concerned with benefiting themselves than humanity.

Probably no country in the world stands to-day in such urgent need of planning as India. For the last 150 years this country had been ruled as a dependency by a sovereign with the seat of authority thousands of miles away. The belief that institutions and methods suited to the ruling country must be good also for the dependency brought about an economic maladjustment, if not chaos, in India. In spite of industrialisation there was visible deterioration in our national life. The war had forced the pace; and post-war reconstruction problems were discussed with all the care and earnestness that leaders of thought and opinion could devote to them. The Government of India appointed an Economic Reconstruction Committee, and even before the war an Economic Planning Committee was at work under the aegis of the Indian National Congress. But in all the proposals for post-war reconstruction that were adumbrated in the West, India and the Asiatic Nations did not come into the picture. President Roosevelt promised to all the fighting nations the Four Freedoms which formed the basis of the Atlantic Charter. But these were not easily reconcilable with Mr. Churchill's desire to see Britain's Empire prolonged into the post-war world. There have been repeated references by representative spokesmen of the U. S. A. to a return to 19th century free trade and free exchanges, to equal access to the food and raw materials of the world in a free market. Such refer-

ences presuppose a perpetuation of earlier economic conditions in which industrialised countries sought for markets in undeveloped lands.

Presiding over one of the sessions of Science and World Order, Mr. Maisky, the Soviet Ambassador in London, observed: "There will undoubtedly come a day when a system of very comprehensive planning—economic, social, political—will embrace the whole world." That date may not be very near; but there can be no more urgent call than the one that demands clear thinking on a planned basis of the future of our country, on the part of those who have the opportunities and leisure to respond to this call.

The second world war strengthened our economic position by the liquidation of our sterling debt and the accumulation of large sterling balances—the result of "the sweat and blood, toils and tears" of the Indian masses. There was good reason for a brighter economic outlook, as it was believed that by the judicious use of the economic purchasing power at our disposal in the form of the sterling balances, and the experience gained by the country in building up a war economy, aided by the increasing development of governmental functions and public control and regulation of economic activities, we would be reorganising our economy on the basis of a highly developed industrial structure. But the inflationary spiral in the post-war period, the catastrophe of the Partition with its concomitants of the great refugees problem, food shortage and paralysis of trade, and the failure of the monsoon prevented the rapid transformation of our economy. A substantial amount of the sterling balances had to be used up to meet recurring deficits in the balance of payments. One bright spot in an otherwise gloomy picture was the end of foreign rule and advent of independence which makes us masters of our economic life and has completely altered our outlook for the future. Our national government appointed a Planning Commission in 1950 for planning our future economy. We can only wish that with a larger vision we shall be able to build up a new socio-economic order which will take us nearer the fulfilment of our national aspirations.

Indian Economics—Aim of the Present Work

We have been frequently told that the expression "Indian Economics" is a misnomer, that there is no such science that can

be properly called by that name. It is also said that the principles of economics as a science are of the nature of general laws applicable to all times and places; and that if they were not so applicable such a science would have no claim to recognition. Those who raise these objections fail to take account of certain vital scientific considerations. The principle of division of labour and specialisation is as operative in the field of scientific studies, as it is in other fields of human activity. The advance of the social sciences, which has been so marked from the beginning of the last century, has been dependent upon the differentiations of the various types of social activities which form the basis of the respective social sciences. But whilst each of these social sciences has to treat as irrelevant those aspects of human activities which do not directly come within its purview, it is equally true that no successful interpretation of the life and activities of any country or nation is possible, if we endeavoured to explain these activities in terms of the laws of any one of these sciences taken by itself. Human life, whether we take into account the life of the individual or the life of a corporate body, is an organic unity and functions as one. When we are applying, therefore, the laws of economics to the life of any single nation, we have to take into account the historical environment, the habits and modes of behaviour of the people. their social and religious institutions, to the extent to which they modify and influence their economic life. Classical economic theory was an analytical study of the conditions that prevailed in the 18th and the 19th centuries in countries like Great Britain, and the laws of economic science enunciated by Adam Smith, Malthus, Ricardo and Mill were a descriptive account of a capitalist society with competition and *laissez-faire* principles underlying it. The events of the last 40 years in the economic world have largely discredited many of these so-called laws of economic science. Soviet Russia has developed a new economic theory capable of explaining the modes of working of the new economic organisation brought into existence after 1917. Even in the earlier days the German Economist, List, elaborated a new economic theory suited to the conditions of the Germany of his days. We feel confident, therefore, in the use of the term "Indian Economics" as connoting a study of the economic life and problems of India, in the light of its past history, of its social and religious institutions, of its physical environment and potentialities, and of its political evolution under British Rule. Rela-

tivity in social sciences as in physics must be increasingly emphasised.

The present work claims to be a study of Indian Economics in this sense. The authors attempt to present in a compact form a survey of the economic problems of India which is intended for the use of the younger generation who have to study Indian Economics in their University careers. This work will also be of use to the larger reading public who are desirous of obtaining a general understanding of our economic life and destiny. They endeavour in the course of the work to indicate the conditions on which this country can build up for itself a prosperous life and what the leaders of a free and independent India can achieve by planning to bring into operation those conditions of prosperity. Their purpose in writing this book is two-fold, an analytical and historical survey of our economic life and problems as they face us to-day, and what free India can immediately achieve by a considered programme of economic reconstruction. There is an increasing recognition by the nations to-day that economics is also an art, and not merely a science. The failures and maladjustments of an economic order that was suited to the needs and demands of the 19th century have forced upon men's minds the desirability of planning for a better order. Starting from this premise, and the fact that India is now able to determine and plan its own economic life, the authors will attempt in these pages to indicate the nature of the economic ailments from which the country suffers in the matter of production, distribution and consumption, and to adumbrate the ways and means by which such ailments can be removed. Whilst they regard this as their main objective, they are not unaware of the limitations imposed upon them by halting information, unreliable statistics, and lack of knowledge of such original materials as are not available for public scrutiny.

There is a type of economic opportunism that seeks to tinker with each economic problem as it happens to arise within what it regards as an unchangeable structure. Such opportunism was characteristic of most of the commissions and committees that were entrusted with the task of reporting upon Indian questions in the past under the British rule. It was equally characteristic of the special experts who were imported from abroad from time to time to advise the British Government of India. It was but natural that such attempts were made to remedy each malady as it occurred, and to stop in time a breach in the walls

from which the waters might have otherwise spread the floods of destruction. But just as the statesman looks ahead, and thinks in terms of principles and not of particular incidents in the political field, so those who have for their objective the planning of a new economic order might well think in terms, not of developing an industry here, or the removal of an odious form of taxation there, but in terms of a larger vision that looks beyond the present.[1] The authors make no claims to the possession of this larger vision in the present attempt. All that they claim is an attempt to survey the problems of the country in their inter-relations, remembering that the life of a nation is an organic whole, that economic planning will involve planning of the social and political structure, and that successful planning in any of these directions is not possible except in the background of an appropriate culture and a sense of values.

CHAPTER II

ECONOMIC PLANNING IN INDIA

The post-war era may well be called an era of planning. We are apt to believe that economic systems must be either wholly planned or wholly planless. As a matter of fact no system entirely conforms to either of these. The Soviet Union is taken as the most completely planned economy; but even there a certain amount of economic production is carried on without definite planning. On the land farmers are allowed to have their own small plots of land to cultivate, and the produce of which they can dispose of as they like. On the other hand, in a country like the U.S.A. which may be taken as an example of the least planned type, we have a tariff with its heavy duties on foreign manufactures and its public utility services and its controlled banking organisation. Under the New Deal there were regulations governing agricultural production and marketing, and the Tennessee Valley authority was a large experiment in national planning.

In the second place, the idea of planning does not neccessarily involve the public ownership of the means of production, distribution and exchange. In practice it may be associated with hundred per cent public ownership; or it may be found to lead to public ownership. What planning essentially implies is the socialisation of demand and the determination by a public

[1] We shall deal with the First Five Year Plan undertaken by the Government elsewhere in this volume.

authority of what is to be produced, how much is to be produced, and where. It is the fear entertained by capitalists and businessmen that planning might take away from them all opportunities of profit making at the cost of labour and the consumer that has inspired in them a sudden love of "economic planning" of their own pattern. An enormous literature has sprung up in our own days, including a variety of reports by experts under the aegis of the United Nations Organisation. In the sphere of practice Point Four of President Truman's inaugural address in January 1949, the aid to Western European countries under the Marshall aid programme, the Colombo Plan for underdeveloped countries, and the activities of the International Bank and the International Monetary Fund may be regarded as evidence of the need of international planning in the world of today.

Economic planning is the logical outcome of an historical development which can be said to have entered a new phase in our own time—a phase of controlled or planned capitalism. It is the logical result of the strains and stresses experienced by capitalism during the last thirty years. "*Laissez-faire* capitalism has evolved by an inherent process of development into monopoly capitalism."[1] This in turn has provoked and made inevitable the intervention of the State as a more or less active directing force in the economic order. Such a system has become familiar to us under the name of "planning." This type of economic planning may be called *functional* planning within capitalism, as contrasted with *structural* planning- planning of a new order with far reaching changes in our ways of life.[2] "So long as capitalism was expanding the inherent weaknesses and contradictions of the system could easily be glossed over. But the logic of political democracy within an environment of economic oligarchy made itself felt in the form of encroachment upon *laissez-faire* principles by increasing state intervention."

"It is not difficult to see how the desire for economic equality is not satisfied by a policy of progressive taxation and social insurance only. With powerful factors re-enforcing the general trend towards greater state intervention, and with a pyramidal income distribution in a community where the majority are sunk in poverty, there is no wonder that universal suffrage leads slowly but certainly to the abandonment of *laissez-faire*. This trend is further strengthened by the very nature of the frustration of a capitalist economy which brings about stagnation, mass unem-

1 See "The Five Year Plan—A Criticism" 1951, by Wadia and Merchant. Also Carr "The New Society," Ch. II.

2 Ibid., pp. 11-12.

ployment and various other ills during its periodic crises. These sufferings are aggravated by protection and a trend towards autarchy, as every country endeavours to save itself from the adverse effects of international forces by controlling its own economy. The second world war and the legacy it left behind in the post-war period, coupled with the ever present fear of depression have made economic planning more and more inevitable, if not quite popular."[1] That post-war economic policy must centre round the idea of planning seems to have attained the status of an axiom.

In our country as in other backward or underdeveloped countries there is all the greater need for planning, so that our resources can be developed with a view to raising the standard of living, and providing the teeming millions with adequate food, clothing and shelter. The State, whatever its nature, has to accept its responsibility in this matter.[2] In spite of the fact that soon after attaining independence Pandit Nehru had made a public plea for replacing the "poetry" of planning by the "prose" of policy, he has been compelled by the logic of hard facts to appoint a Planning Commission which has already prepared the First Five Year Plan, and which is being implemented at present. The period of the Plan will end in 1955-56.

Capitalism

"What is familiarly and briefly called "capitalism" is a socio-economic system that gradually developed in the 18th and 19th centuries in Western Europe, partly under the influence of men's ideas about individual rewards and punishment, and partly as the result of the teaching of the Physiocrats and Adam Smith. The theories of the latter were mainly aimed at demonstrating the failure of municipal or guild control, or government interference. There can be no doubt that capitalism in the first three quarters of the last century contributed to an immense increase in the wealth of Western countries, and to a rising standard of living

1 Is it necessary to add that neither capitalism nor socialism, neither equality in the economic organisation of society nor inequality as between men and men, are ends in themselves? They, and all patterns of social life and institutions, are to be judged by our conception of the good life which such patterns make possible and promote in the individuals who live under them. The equal worth of every human soul does not necessarily imply equal capacity; nor does the fact of unequal capacity do away with the truth of equal worth.

2 Cf. "So long as the villager lived in a world where few were richer than himself, no one asked for more. Now however the spending of greater wealth and higher standards which capitalism has made possible in the West are shaking the old contentment to its foundations. For there is no quick method of attaining the higher standards which the peasant is now learning to want and his frustration turns easily into envy corrosive to all settled government." Maurice Zinkin, "Asia and the West," 1953, pp. 32-33. Cf. also "It should now be regarded as immoral to leave any human being below certain standards of physical and mental welfare and development." Jullian Huxley, "The New Evolution" in "Our Emergent Civilisation," ed. by Ruth Anshen, New York, 1947.

for their rapidly increasing population at the cost of the East. Capitalism has been defined in its economic aspects as a stage in the development of industry in which land and the other instruments of production are owned by a small class with no more responsibility than attaches to the ownership of a watch or an umbrella, a stage in which such ownership carries with it the control of production and distribution of commodities that are the life of the nation, and control also of the livelihood of the rest of the community. But capitalism is not a particular type of economic organisation only. It is associated with the doctrine of *laissez-faire* in the field of political activities; it makes profit the measure of the social utility of commodities. The philosophy of human life implicit in capitalism was typically brought out by a student who, when asked "What is the purpose of a textile factory?" answered "to earn profits for the shareholders."

"The dominant philosophy of the nineteenth century assumed that every individual was the best judge of his own interests, and he was prevented from doing serious harm to others by the checks of an individualistic system, centred in universal competition. This spirit of irresponsible self-seeking has persisted in an age when competitive checks have disappeared and mass production, aided by group organisation, has taken the place of the competing individual."

"We, in India, have inherited from a hundred and fifty years of British Rule a system of capitalist economy with most of the weaknesses of the capitalist order in an accentuated form, including the distribution of a large proportion of social income to the rich, the centralisation of wealth in a few hands, and progressively rising prices without a corresponding increase in wages. The malaise that affects the rest of the capitalist world also affects India. As the spirit of irresponsibe self-seeking that characterises the capitalist order still remains dominant, as is evident in the history of the last fifty years and particularly the recent decade, the choice lies between regimentation such as is implied in planning and chaos."

"The post-war world is a world of planning. It has become a truism to point out that the growth of industrial combination and a caste of economic directors of joint-stock companies who are the masters both of the share-holders and consumers, has resulted in the concentration of power in the hands of an oligarchy that acknowledges no responsibility except to the God of Profit. It is equally a truism to assert that a capitalist order

has led to the degradation of humanity, turning human beings into commodities in a labour market, creating marketable Robots out of the artisans of the Middle Ages, compelled to sell their labour and to work under conditions of perpetual insecurity. A desperate humanity has turned for relief to "totalitarian" economies, involving governmental control over production, distribution and consumption of commodities, transferring into the hands of a central authority problems how much is to be produced, how the products are to be distributed, of the scale of prices, the amount of wages, the place of work and the kind of labour to be assigned to the worker."[1]

Planning in India

The history of the West during the last three decades has been a history of diversified attempts at planning their economic life, symbolised in Fascism, Nazism or Communism or in attempts like the New Deal in the U.S.A. and the highly complex economic legislation in the United Kingdom, frequently referred to as democratic planning.[2] Sir M. Visvesvaraya was the first to write about Indian Economy on a planned basis, in a book entitled "Planned Economy for India" (1934). It was no doubt planning within the economy, but it merits attention as the first concrete attempt to think in terms of planning. This was followed by the appointment of the National Planning Committee with Pandit Jawaharlal Nehru as chairman and Prof. K. T. Shah as the General Secretary, by Subhas Chandra Bose, the President of the Indian National Congress in 1938. The Committee was to prepare a comprehensive economic plan for India. The Committee was fully representative of various interests and composed of fifteen members in addition to the representatives of many of the Provincial and State Governments. A number of expert committees were appointed to do the preliminary work in their own special fields. Due to political upheaval, however, its work was interrupted and during the war period 1940-45 its work was practically suspended. The reports of the committees were prepared under the guidance of Prof. K. T. Shah. The parent committee found it difficult to review and adopt them. These reports,

1 We have quoted these paragraphs from "The Five Year Plan—A Criticism" op. cit. pp. 1-4.

2 The term, Planning, is very loosely used to mean anything from a few sporadic attempts by the State to regulate and control some specific aspects of economic life to the planning of comprehensive sectors covering a substantial, if not the entire, economic, social and political life of a country. It would be better if a precise distinction is instituted between economic planning as planning within capitalism, functional planning, and planned economy as planning of economy as a whole on a socialistic basis. Cf. Zweig, "Planning of Free Societies," 1942. For different types of planning, see "Economic Planning" by S. E. Harris, 1949.

which contained valuable material and were used by Governments as a basis for their more detailed plans, were published under the editorship of Prof. K. T. Shah.

The Government of India appointed a high level committee under the chairmanship of the Commerce Member in June 1941, with a number of sub-committees, composed of official as well as non-official members to help it to prepare developmental plans. This was later replaced by a Reconstruction Committee, composed of the Members of the Government of India and presided over by the Viceroy. This was followed by the creation of a Planning and Development Department (June 1st, 1944) with Sir Ardeshir Dalal,—one of the signatories to the Bombay Plan prepared by eight leading capitalists and business men of India,—as the member in charge. The Provincial and State Governments were moved to set up their own planning organisations and prepare five year plans. These plans and the plans prepared by the various departments of the Central Government were to be co-ordinated by a body of experts in the Planning and Development Department. So far as the Provincial Governments were concerned they aimed at rural reconstruction and helping those villages in particular from which there was good response to military recruitment. Thus the Bombay Government published a booklet entitled "Planning for the Future of Bombay's Countryside," with a prospective expenditure of Rs. 60 crores; and the details of their scheme were published in another brochure, "Post-War Reconstruction," which became the model for the plans of different provinces. These plans were merely estimates of expenditure on public works and on social services, without any attempt at laying down definite objectives or at co-ordination. They were prepared for the most part as an effective offset to deflation in the immediate post-war period, the bogey of which was raised by vested interests. All these haphazard schemes hardly deserve to be called plans.

The Government prepared a number of reports through their departments and with the help of experts. Important among these were "Post-War Forest Policy for India," a note by Dr. Howard, "Technological Possibilities of Agricultural Development in India," a note by Dr. Burns, "Report on Health Insurance for Industrial Workers," by B. P. Adarkar, "Post-War Development of Indian Fisheries," memoranda on "Indian Monetary Policy in the Post-War period," on "Post-War Trade Policy," and "Localisation of Industries," prepared by Dr. Gregory,

Economic Adviser to the Government of India, the Kharegat "Memorandum on Agricultural Development" and Report on Irrigation Projects. There were also reports prepared by expert committees, like the Gadgil Committee Report on "Agricultural Credit," Sarayia Committee on "Co-operation" and Krishnamachari Committee Report on "Stabilisation of Agricultural Prices." Apart from these, the Reconstruction Committee also issued their First and Second Reports on Reconstruction Planning. Finally we may include in the list the Sergeant Educational Scheme, the Bhor Committee Report on Public Health, the Rege Committee Report on Labour and Plans of Transport and Railway Reorganisation.

The Planning and Development Department established 31 panels of officials and non-officials, with knowledge of the industries concerned, for planning the development of individual industries or group of industries in consultation with State Governments. They were to make recommendations about the possibilities of development, location, organisation, government regulations and control. A statement on India's industrial policy was issued by the Department on the 23rd April 1945, which emphasised the need for planning and controlling industrial progress in public interest, and also a wide measure of State encouragement and assistance. Basic industries were to be nationalised, if adequate private capital was not forthcoming, and where development was regarded as essential in the national interest. All these plans and schemes which had a bearing on post-war reconstruction, piecemeal and compartmental as they were, without a vision of planning as a whole, were not likely to offer an effective solution of our fundamental problem.[1]

Big business in our country, like their confrères in the West also put forward their Rs. 10,000 crores plan, for the economic development of India with the objective of doubling the present *per capita* income in fifteen years, and trebling the total national income to allow for an increase of population at the rate of 5 million per annum. This plan has been well characterised as "an exercise in economic arithmetic," "little more than a statement of objectives."[2] The Radical Democratic Party of Mr. M. N. Roy published a "People's Plan," suggesting an investment of Rs. 15,000 crores in ten years with the objective of providing satisfaction of

1 Cf. "This planlessness of the State Plans might have been remedied by a comprehensive effort at the Centre, by drawing up a co-ordinated plan for all expenditure, State and Central, and bringing these into relation with the general ways and means position." D. R. Gadgil in the foreword to "Planning of Post-War Economic Development in India" by M. V. Sovani, 1951, p. IX.

2 Harris, op. cit., p. 230. For our views see "Bombay Plan—A Criticism," 1946.

the basic needs of the people in respect of food, clothing, shelter, health and education. Amongst other productions of this plan-productive period may be mentioned Shri Agarwal's Gandhian Plan, Sir M. Visvesvaraya's "Reconstruction in Post-War India," and Mr. G. D. Birla's "Five Years' Plan" with more modest targets than those of the Bombay Plan.

The Planning and Development Department was abolished after the resignation of Sir Ardeshir Dalal early in 1946. With the reorganisation of the Central Government in September, 1946, when Pandit Jawaharlal Nehru became Premier, an Advisory Planning Board under the chairmanship of Mr. K. C. Neogy was set up in October, 1946, to review the planning done so far by Government, the work of the National Planning Committees set up by Congress and other plans, and make recommendations for co-ordination in respect of objectives and priorities, and the future machinery of planning.

The report of the Advisory Planning Board issued towards the end of 1946 stated as the fundamental objective of planning the raising of the general standard of living and ensuring useful employment for all. Whilst advocating the maximum development of the resources of the country, and an equitable distribution of the wealth so produced, the Board refused to fix any targets. "It must be frankly recognised that we do not at present possess in India either sufficient knowledge and statistical information, or sufficiently extensive control over economic activity to be either able to frame or execute plans whose combined and cumulative effect will be to increase *per capita* income by a predetermined amount."[1] As regards priorities, first preference was to be given to defence industries and to industries relating to prime necessities such as food, clothing and housing, to coal and transport.[2] Irrigation, hydro-electric power, iron and steel, and chemicals would also require equal preference. The Board recommended the setting up of a full time expert Planning Commission at the Centre, to be assisted by a consultative body, the establishment of a Central Statistical Office, a permanent Tariff Board and a Priorities Board.

The Partition of the country in August, 1947, involved the necessity of a fresh start in planning. The new Constitution of

1 Report of the Advisory Planning Board, June 1947, p. 4.

2 The inherent contradiction between the two priorities of improving the standard of comfort by adequate provision of the necessaries of life and of defence expenditure has been frequently commented upon. The difficulties experienced by the United Kingdom and the NATO countries in Europe may prove an object lesson in this connection.

the Indian Republic laid down the division of power between the Central and State Governments on the lines of the Act of 1935, adding a few more entries in the central list with a view to enlarging the power of the Centre.

Long before the framing of the Constitution, and as early as 1944, under direction of the Central Government, the Provinces had prepared plans, and schemes selected from them were partly executed. The Central Government, likewise, had commenced work on plans of its own. Among the more important schemes on which work was already started were the Damodar Valley Project, the Tungabhadra Project and the Bhakra Dam Project.[1]

The report of the Economic Programme Committee, January, 1948, appointed by the All-India Congress Committee is an important document representing the views of the progressive and radical section of the Congress. If its recommendations had been implemented by a comprehensive planned policy, there is no doubt that we would have been launched on the path of a Socialist order.

"In April, 1948, the Government of India issued a resolution of their industrial policy. Their objective was "to establish a social order where justice and equality of opportunity shall be secured to all the people," to promote a rise in the standard of living, and offer opportunities to all for employment. A National Planning Commission was to be established. A dynamic policy was to be directed at the increase of production. "For some time to come the State could contribute more quickly to the increase of national wealth by expanding its present activities, and by concentrating on new units of production in other fields." Government was to take over the exclusive monopoly of arms and ammunition, the production and control of atomic energy, and the ownership and management of railways. In coal, iron and steel, aircraft manufacture, ship-building, manufacture of telephone, telegraph and wireless apparatus, Government was to be exclusively responsible for the establishment of new undertakings. The rest of the industrial field was to be open to private enterprise. A number of other industries like automobiles and tractors, electrical engineering, machine tools, heavy chemicals, cotton and woollen textiles, cement, sugar, etc., would be sub-

1 For details of various schemes and plans see "Economic Development in Selected Countries" United Nations, 1947; Dr. Gyanchand's Report on "Provincial Development Programmes," Government of India, 1950; "Planning of Post-War Economic Development in India", by N. V. Sovani, op. cit.; Report of the Advisory Planning Board," 1947. Also "A Study of Economic Plans for India," by D. S. Nag, 1949, a small volume giving a brief account of all the plans.

ject to regulation and control. Cottage and small scale activities would be integrated with large scale industries. While foreign capital would be of value in the rapid industrialisation of the country, the conditions on which it could participate in Indian industry would have to be carefully regulated. The major interest in ownership and effective control would always be in Indian hands. Such was an outline of the Government of India's industrial policy, an attempt to reconcile private enterprise with State enterprise."[1]

Realising the lack of co-ordination between the projects of the States and the Central Government, and in pursuance of the Industrial Policy Resolution of April, 1948, the Government of India appointed in March, 1950, a Planning Commission presided over by the Prime Minister to "make an assessment of the industrial, capital and human resources of the country," "formulate a plan for the most effective utilisation of these resources," to determine priorities and the conditions for successful execution of the plan, to watch progress and recommend adjustments of policy.

The Commission examined the schemes already under execution, as well as new schemes, and published a draft outline of the first five year plan, in 1951, and widely circulated it for eliciting public opinion.[2] After a careful study of the criticism the Planning Commission prepared the final First Five Year Plan published early in 1953. We give, in an appendix, a summary of the Plan.

It is necessary to make a brief mention of the Colombo Plan for co-operative development in South and South-East Asia prepared by the British Commonwealth Governments. It was the outcome of a conference of Foreign Ministers representing the eight Commonwealth countries held at Colombo in January, 1950. The Conference was convened "to exchange views on world problems, with particular reference to South and South-East Asia, and the possibility of promoting economic development and raising living standards."[3] The Plan extends over six years from July, 1951, with a total cost of £1,868,000,000. "Realism is the key note of the entire plan. Long term projects previously planned by individual countries of the area have, for instance, been ruthlessly curtailed in order to arrive at a feasible over-all programme. Separate programmes for each country have been co-ordinated as an entity, and the main emphasis, except for Singapore, is (shown to be) on agricultural

1 "The Five Year Plan, A Criticism". op. cit. pp. 7-8.

2 For our views on the Draft Plan see ibid.

3 Background to the Colombo Plan for Co-operative Economic Development in South and S. E. Asia issued by the British Information Services, India, p. 1.

rather than industrial development."[1] It involves an outlay of Rs. 1,840 crores in India in the period 1951-57 including expenditure to cover the depreciation of Railway assets in the period of the Plan.

A Commonwealth Bureau and a Council for Technical Co-operation have been set up. The British Commonwealth countries were to contribute upto £8,000,000 in the first three years of the Plan towards implementing the scheme of adequate technical assistance. The major part of the finance of the Plan has to be provided for by the countries concerned, and it was expected that loans from the International Bank for Reconstruction and Development and gifts and loans from other countries would help to bridge the remaining part of the cost.

APPENDIX

THE FIRST FIVE YEAR PLAN

A Summary

PART I

I The Problem of Development

The programme of the Plan is two fold, leading at once to increased productivity and reduction of inequalities. While in the initial stages the emphasis is on increased production, planning is not to be confined to stimulating economic activity within the existing social and economic framework. That framework has to be remoulded to secure for all members of the community full employment, education, security against sickness and adequate income.

The basic approach for planning has to be democratic, which implies energising the community and placing before it a goal of endeavour which will call forth all its creative urges.

The level of production and the material wellbeing of a community depend upon the capital at its disposal,—the amount of land and productive equipment in the shape of factories, locomotives, irrigation facilities, power installations and communications. These are two ways of stepping up capital formation—one to utilise resources hitherto unutilised and the other to divert resources from the production of consumer goods. An underdeveloped country has also large resources of unutilised or underutilised manpower. In such countries with low standards of living and rapidly increasing population, capital formation at

1 Economic Development of South & S. E. Asia," BF 1549 issued by the British Information Services," pp. 3-4.

around 20% of national income would be necessary for securing a rate of growth commensurate with needs.

Doubling *per capita* incomes

The objective of planning in India must be to double *per capita* incomes as early as possible. Three factors are to be taken into account (a) rate of growth of population, (b) the relationship between investment and increase in national output, (c) the proportion of the increase in national output that can be devoted to investment. It may be assumed that for the next two or three decades the present rate of population growth—1¼ per cent per annum, will be maintained. As regards the relation between investment and output, it would be legitimate to assume a ratio of 3:1, that is, that a unit increase in national output will require about three times as much by way of investment or addition to capital equipment.

The national income of India in 1950-51 was approximately Rs. 9,000 crores. If the community can plough back into investment as much as two-thirds of the additional income each year, *per capita* incomes can be doubled—which means aggregate national income can be increased by 160 per cent—in about 22 years. Such a high rate of saving would, however, strain the economy excessively. In the present Five Year Plan capital formation is estimated to rise by about 20 per cent of the additional national income each year. The internal resources will be supplemented by external resources. By 1955-56 national income will have gone up to about Rs. 10,000 crores, that is, by about 11 per cent. If from 1956-57 onwards investment is stepped up each year by about 50 per cent of the additional output, it would be possible to double *per capita* incomes in about 27 years from now, that is, by 1977. Trebling of resources available for investment in a period of 12 years from 1955-56 to 1967-68, and maintaining the annual rate of investment for ten years thereafter at the high level of 20 per cent of national income involves efforts which will necessitate a great deal of hard work and austerity.

Improvement in Productivity and Employment

A steady improvement in techniques is a vital element in development. There is large scope in India for improvement in this respect. In agriculture a large increase in output can be secured through improvement in agricultural practices and the use of better seed, fertilisers, etc.

Employment has two aspects. In the construction stage idle labour has to be used to the maximum extent. Secondly, mea-

sures have to be adopted for increasing the productivity of labour. This depends on capital accumulation and improvements in techniques. The Five Year Plan envisages progress through the expansion of irrigation, power, basic industries, transport and other services. The elimination of unemployment in an underdeveloped economy is a somewhat long-term problem. Excessive unemployment in the process of technological change has to be guarded against.

II Objectives, techniques and priorities in Planning

Structural features of the Indian Economy

In the last four or five decades there has been considerable industrial development accompanied by urbanisation and expansion of commerce. Agricultural techniques have not advanced; there is chronic unemployment in the rural areas and cottage industries have been decaying. Population has been growing rapidly, while inequalities of income and wealth have been accentuated.

The role of the State in Economic Development

In promoting capital formation, and in the realignment of productive forces, the State will have to play a crucial role. This need not involve complete elimination of private agencies in agriculture or business and industry. It does, however, mean a progressive widening of the public sector. Completely unregulated and free private enterprise exists hardly anywhere in the world. The view that private enterprise can function only on the basis of unregulated profits is already an anachronism. In a planned economy the public and private sectors must function as parts of a single organism.

In agriculture not only must the State assume the responsibility for providing the basic services like irrigation, power, roads and communications; it must also provide finance, marketing, technical advice, etc. In the industrial field, in a planned economy the private sector has to accept certain obligations towards the worker, the investor and the consumer, and to maintain a high standard of integrity and efficiency.

Institutional Changes

Major changes are necessary in the ownership and management of land. With the abolition of Zemindari, progress has been made in protecting the cultivator against intermediaries as well as money lenders and traders. Capital formation through large profits in the hands of private agencies involves misdirec-

tion of resources. State trading is a potent instrument of planning. Increase in production will necessitate expansion of money supply and extension of credit institutions to secure larger savings from current incomes. The Reserve Bank will exercise a direct role in helping to create the machinery for financing development activities and for ensuring the flow of finance in the intended directions.

Price Policy and Pattern of Priorities

In relation to price policy the aim should be to maintain a structure of relative prices which will avoid inflation and bring about an allocation of resources in conformity with the targets of the plan. An increase in investment is possible only by a postponement of increases in the standard of living; there is scope for cutting down consumption expenditure in the higher income groups, rather than in a tightening of the belt in the lower income ranges.

Inequalities of income and wealth have to be reduced, by measures like death duties and progressive income tax rates, as well as by control of excessive profits.

For the immediate five year period agriculture, including irrigation and power have topmost priority, and will take up the bulk of the resources available to the public sector. Progress in the industrial field would, therefore, depend on effort in the private sector. A beginning has, however, to be made by the State in developing key industries, like iron and steel, heavy chemicals, manufacture of electrical equipment and the like.

III Assessment of Resources

As for resources available to the Central and State Governments for financing the plan it is estimated that public savings (that is, savings which Governments are able to make from current revenues and from the operation of state enterprises like Railways) will finance about Rs. 738 crores of the expenses visualised. Private savings available to the public sector through loans, small savings, etc. have been estimated at Rs 520 crores. The two sources will thus meet about Rs. 1258 crores of the planned outlay of Rs. 2069 crores. The following table shows a breakdown of the estimates of the plan:—

	1951-56		
	Centre including Part C States	Part A and B States and Kashmir	Total
Public Savings from			
(a) Current revenues	160	408	568
(b) Railways	170	—	170

Private Savings absorbed through			
(a) Loans from the Public	36	79	115
(b) Small Savings and other unfunded debt	270	—	270
(c) Deposits, funds, and other miscellaneous sources	90	45	135
Total ..	**726**	**532**	**1,258**

In addition, credit can be taken for external assistance already received from the International Bank, the U.S., Canada, Australia, etc., amounting to Rs. 156 crores. There is still a gap of Rs. 655 crores to be met from further external resources, additional taxation and borrowing, and deficit financing.

Deficit financing involves injecting additional purchasing power into the economic system, and it has, therefore, inflationary possibilities. During the period of the Plan India will be able to draw upon the sterling balances to the extent of Rs. 290 crores. This will add to the total resources available in the country for consumption and investment. If deficit financing adds only an equal amount to the purchasing power of the community, there may not be any net inflationary pressures created. When deficit financing raises the prices of essential commodities it becomes in effect the most inequitable form of taxation. It is, therefore, important that all avenues of taxation and saving are explored to the full before incurring larger budgetary deficits.

India's total tax revenue amounts to only about 7 per cent of the national income. This is due to the narrow range of the population affected by taxation, which reflects in turn the poverty of the large masses of the people. The scope for further taxation will have to be constantly explored. According to present estimates, by the end of the Plan period the tax revenues of the Central and State Governments are expected to be about Rs. 70 to 80 crores higher than in 1950-51. The estimate covers normal increases at the existing rates of taxation, as well as estimated yields from measures like increases in the tax on land, death duties, betterment levies, higher taxes on luxuries, etc. It is also necessary to improve the technique of borrowing. An amount of Rs. 385 crores has to be raised by the Centre and States through loans, small savings and unfunded debt. The greater part is to come from small savings. Of the total internal resources of Rs. 1258 crores, the Central Government has to raise Rs. 726 crores, the States Rs. 532 crores. The Centre, among other things, will have to maintain a revenue surplus of Rs. 26 crores, per

annum in the remaining years of the Plan. In the case of the States additional revenue of about Rs. 232 crores will have to be raised over the five years. There will be financial assistance from the Centre to the States under a variety of heads—loans for river valley schemes, rehabilitation of displaced persons, community projects, as well as grants for road construction, raising food production, etc

The task of organising finances to the pattern required for implementing the Plan has yet to begin at the State end. The capacity of the Centre to give additional assistance to the States is limited. The pressure on resources at the Centre would make it necessary to readjust the whole scheme of Central assistance as now worked out.

The data available in India for an over-all assessment of resources, taking into account the output and consumption requirements of the different sectors, are altogether inadequate. According to these estimates India's national income in 1950-51 was about Rs. 9,000 crores, 95 per cent of which was required for meeting consumption requirements. Thus only 5 per cent or about Rs. 450 crores were available for capital formation. It is visualised that capital formation should be raised from Rs. 450 crores to Rs. 675 crores by 1955-56. If capital formation is thus stepped up, about Rs. 2,700-2,800 crores of capital expenditure can be met from domestic resources in this five year period. The releases from sterling balances will add another Rs. 290 crores. India has also received external assistance of Rs. 156 crores to date. The total resources work out to about Rs. 3,150-3,250 crores.

The capital expenditure visualised in the development programme of the public sector would amount to Rs. 1,600-1,700 crores, the rest being expenditure of a recurring nature, health education, etc. Capital expenditure in the public sector will absorb around 50 per cent of the total investible resources, a high proportion, but inevitable, in view of urgent needs like irrigation, power and transport.

Deficit financing is tied up with the availability of essential commodities. Scarcity of food is a major factor limiting the volume of development expenditure. Imports required in the development of the public sector will be relatively small,—about Rs. 400 crores over the five year period. As a result of increased production in various lines, the country's import requirements are likely to diminish, and exportable surpluses to expand. It

would appear that a deficit of Rs. 180-200 crores per annum in balance of payments is likely and necessary in the remaining years of the Plan. About Rs. 50 crores of the balance of payments deficits could be financed each year from the sterling releases. But the ability to meet deficits in excess of this will depend on the availability of additional external assistance. If this is not forth coming, we may reduce the domestic availability of certain commodities entering foreign trade.

Mobilisation of additional Resources

The problem of mobilising additional resources has two aspects, one physical and the other financial. The first relates to the question of utilising under-employed manpower in the development programme. In the programme of agriculture the increase in food supplies is designed to remove one of the major bottlenecks to embarking on a programme of fuller utilisation of manpower resources. The Plan also visualises using finance as a means of attracting underutilised manpower and other resources. Minor irrigation projects are another field in which local manpower could contribute to the lowering of costs.

The financial mechanism behind planning may be strengthened by improvements in the techniques of borrowing which should be so adapted as to bring home to the people the larger purposes, for which the loans are required, and to give scope for direct participation in the financing of the various development programmes. Savings of the lower income groups through insurance schemes and institution of provident funds could become a growing source of finance for development.

IV Five Year Plan in Outline

The Five Year Plan involves an outlay on development by public authorities of Rs. 2,069 crores over the period 1951-56. The distribution of this expenditure is summarised below:

	Crores of Rs.	Per cent of Total
Agriculture and Community Development	361	17.5
Irrigation	168	8.1
Multi-purpose irrigation and power projects	266	12.9
Power	127	6.1
Transport and Communications	497	24.0
Industry	173	8.4
Social Services	340	16.4
Rehabilitation	85	4.1
Others	52	2.5
Total	**2069**	**100.0**

The high priority given to agriculture, as well as to basic services like power and transportation limits the investment which the public sector can itself undertake in industries, which will have to rest on private resources. These will be supplemented at certain points by resources of the public sector and by foreign investment.

The significance of the outlay of Rs. 2,069 crores from the point of view of the additions it will make to productive equipment in the public and private sectors will be clearer from the following rough classification:

	Crores of Rupees
1. Outlay which will add to the stock of productive capital owned by Central and State Governments	1,199
2. Outlay which will contribute to building up productive capital in the private sector:	
a. Expenditure on agriculture and rural development (excluding community projects and provision for scarcity affected areas) ..	244
b. Loans for transport and industry	47
c. Provision for stimulating local development (community projects and local works) ..	105
3. Outlay on social capital	425
4. Outlay unclassified above (including provision for scarcity affected areas)	49
Total ..	**2,069**

It will be seen that 60 per cent of the planned outlay will result directly in the creation of productive capital in the ownership of the Central and State Governments.

Distribution and phasing of expenditure

The distribution of the total outlay as between the Central and State Governments is summarised below:

		Rs. crores
Central Government (including Railways)		1,241
States	Part A	610
	Part B	173
	Part C	32
	Jammu and Kashmir	13
	Total	**2,069**

This distribution is not an indication of the schemes which fall within the respective spheres of the Centre and the States. The multi-purpose river valley schemes are the schemes of the State Governments but as the territorial coverage of these projects extends over two or three States, the exact distribution of the financial liability cannot be foreseen at this stage. In view of similar difficulties, the provisions for community projects, minor and major irrigation work, scarcity affected areas, rehabilitation, social education, etc, are shown as part of the Central Government's development programme.

The following table summarises the outlay of the Centre and of the States (excluding Jammu and Kashmir) under various heads:

	Centre	Part A	Part B	Part C
		(Crores of Rupees)		
Agriculture and community development	186.3	127.3	37.6	8.7
Irrigation and Power	265.9	206.1	81.5	3.5
Transport and Communications	409.5	56.5	17.4	8.8
Industry	146.7	17.9	7.1	0.5
Social Services (including rehabilitation)	191.4	192.3	28.9	10.4
Miscellaneous	40.7	10.0	0.7	—
Total ..	**1,240.5**	**610.1**	**173.2**	**31.9**

The table below shows the financial basis of the Plan:

	Rs. Crores Central Government	States (including Jammu and Kashmir)	Total
Planned outlay on development	**1,241**	**828**	**2,069**
Budgetary Resources:			
(a) Savings from current revenues	330	408	738
(b) Capital receipts (excluding withdrawals from reserves) ..	396	124	520
(c) Internal inter - governmental transfers in connection with the Plan (i.e. Central Assistance)	—229	229	
	497	761	1,258
External resources already received	156	—	156
Total ..	**653**	**761**	**1,414**

The balance of Rs. 655 crores, necessary for the public development programme, will have to be found from further external resources, or from internal taxation and borrowing and by deficit financing.

Due to an excessive concentration of outlay in many of the States, in the first two years of the Plan, expenditures on a number of schemes in 1953-54 will reach their peak levels. There will be scope for starting work on new schemes only towards 1954-55 and in 1955-56.

This programme is based on the appraisal of the needs of the economy as a whole and is related to an assessment of the effort that is likely to be forthcoming from the private sector. In agriculture the supplemental investment required would be in the form of direct contributions of labour by the farmers themselves. In industrial development account is taken of the working plans of 40 larger and medium scale industries which cover two thirds of the total output of factory enterprise.

The Statement below indicates a few targets:

	1950-51	1955-56
I Agriculture		
Foodgrains (million tons)	52.7	61.6
Cotton (lakh bales)	29.7	42.4
Jute (lakh bales)	33.0	53.9
II Irrigation and Power		
Major irrigation (million acres)		
Minor irrigation (million acres)		
Electrical energy (capacity in million KWS) ..	2.3	3.5
III Industry		
Iron and Steel (lakh tons)		
Pig iron	3.5	6.6
Finished steel	9.8	13.7
Cement (lakh tons)	26.9	48.0
Fertilisers (thousand tons)		
Ammonium Sulphate	46.3	450.0
Superphosphate	55.1	180.0
Locomotives	—	170
Mill Cloth (million yards)	3,718	4,700
Handloom (million yards)	810	1,700
IV Transport		
Shipping (GRT thousands)	384.5	598.0
Roads (thousand miles)	29.5	33.1
V Education		
Primary and Basic Schools (lakhs)	180.1	240.7
Industrial and Technical Schools (thousands) ..	41.5	65.4
VI Health		
Hospitals (beds in thousands)	106.5	117.2
Dispensaries (number)	6,587	7,455

PART II

I. Administration and Public Co-operation

The Five Year Plan attempts to translate the goals of social and economic policy into a national programme based upon the assessment of needs and resources. The pace of development will depend on the efficiency of the public administration and the co-operation which it evokes from the public.

The objectives to be achieved in public administration are integrity, efficiency, economy and public co-operation. There will have to be a continuous war against corruption, through scrutiny of officials and through a return by public servants each year of moveable or immovable property acquired by them and their relatives. Efficiency is to be secured by selection of individuals with special experience and knowledge in banking, finance and industry, and men with high academic qualifications should be drawn into the administrative services. A central board of an advisory character should give detailed attention to questions of importance for the public sector, such as personnel for management, accounting problems and price policies. For work in the districts, the administration should be strengthened by the training of district officials with periods of duty at village level in addition to duties in charge of larger development units. Village panchayats should provide leadership and assume responsibilities for developing the resources of the village. The Panchayats could frame programmes for production, budgets, organise voluntary labour for community work, bring waste land under cultivation, and secure the help of social service agencies to train workers.

Public co-operation and public opinion constitute the principal force and sanction behind planning. Efforts should be made to secure a wide spread understanding of the plan through the press, the radio, the film, song and drama. The plan has to be expressed in terms of the common needs of the people, and, therefore, the national plan has to be broken up into local units, in terms of which local enthusiasm can be aroused. Among the agencies of public co-operation may be mentioned local self-governing authorities, professional associations, Universities, voluntary organisations, for which Rs. 4 crores are provided for assistance, and youth camps. The Bharat Sevak Samaj is specially mentioned as a non-political and non-official national platform for constructive work.

II Programme for Agriculture

The total cultivated area of India is about 324 million acres. The cultivated area during the last forty years has not kept pace with the growth of population. The average production of cereals is in the neighbourhood of 44 to 45 million tons. For ensuring an average availability of 13.7 ozs. per day the production of cereals has to be raised in 1955-56 by about 6.7 million

tons, and the target for additional production has been set at 7.6 million tons. The requirements of cotton and jute amount respectively to 5.3 million bales and 7.2 million bales.

The purpose of planning is to bring about a balanced economy, keeping in view the major objectives of community development, increased production and equitable distribution. Diversification of rural economy is sought through the development of dairying and horticulture and the growth of village industries. The plan also provides for the development of fisheries. Co-operative methods of organisation are to be fostered. Rs. 50 lakhs are assigned for training in co-operation and for experiments in different forms of co-operative organisation.

Land Policy

An upper limit to the amount of land in the case of large landowners is recommended, the limits being determined by the estimation of an average level of income or an average quantity of agricultural produce. Tenants of large landowners should have security of tenure, and provision is to be made to enable tenants to become owners. Legislation should be undertaken in the States for land management, standards of cultivation, etc. Authority should be vested in Government to take over farms in excess of the limit and otherwise and to hand over cultivation to co-operative groups.

For small farmers there is to be consolidation of holdings, and fixing of minimum holdings below which sub-division will not be permitted. Tenants-at-will should be granted leases varying from five to ten years, renewable subject to the owner's wish to cultivate. In fixing the rent of land the rate should not exceed one fourth or one fifth of the produce. Small and uneconomic holdings should be grouped into co-operative societies on a voluntary basis.

In the villages the village Panchayat should become the agency for land management and land reform, with necessary powers conferred by the legislature enabling the village community to manage its entire land as if it were a single farm. Landless agricultural workers are to be resettled on land by gifts of land and grant of occupancy rights in house sites.

Food Policy and Targets of Production

Stringent controls over procurement of food grains, restriction of movements, price control and rationing, are necessary for safeguarding the minimum consumption standards of the

poorer classes and facilitating a programme of direct utilisation of unemployed manpower. The aim is to increase domestic production, to secure an increase in marketable surplus, to distribute the same as equitably as possible and to eliminate the need to import food grains. A policy of price stabilisation has to be adopted with certain ceiling as well as minimum prices, so as to safeguard both the interests of producers and consumers.

Deficit financing for fuller employment is possible only on the basis of control and supply and distribution of food grains and essential commodities at reasonable prices. Food controls are therefore to be kept intact and a food control policy executed as an all India policy. Responsibility for fixing prices, and organising the procurement and distribution of grains must remain with the Centre. Finally, a change in the food habits of the people is highly desirable, in view of the world shortage and high price of rice.

The plan lays down the following targets of additional production:

Commodity	Quantity in millions	Percentage increase
Food grains	7.6 (tons)	14
Cotton	1.26 (bales)	42
Jute	2.09 (bales)	63
Sugar cane	.07 (tons)	12
Oil seeds	.04 (tons)	8

The production programme includes schemes of State governments for a total food production target of 6 million tons at a cost of Rs. 125 crores, and supplementary schemes proposed by the Planning Commission for additional production of 1.6 million tons. The food production targets are based upon programmes of expenditure as below:

1. Community projects (Rs. 90 crores). 2. Additional provision for minor irrigation works (Rs. 30 crores). 3. Additional provision for Grow More Food during 1952-53 (Rs. 10 crores). 4. Programme for the construction of tube-wells (Rs. 6 crores). 5. National Extension Organisation (Rs. 3 crores).

The schemes included in State plans provide for

	Million tons
Major irrigation works	2.01
Minor irrigation works	1.78
Land reclamation and development	1.51
Manures and fertilisers	0.65
Improved seeds	0.56
Total	**6.51**

The targets of additional production, large as they are, are no more than a starting point for the actual planning. The uncertainties of agricultural production have always to be allowed for.

Community development programme

The programme has been launched during 1952. For each community project there will be about 300 villages with a cultivated area of 150,000 acres and a population of 200,000, divided into three blocks. The estimated expenditure for each project is Rs. 65 lakhs over a period of three years. There is also to be the establishment of a national extension organisation for intensive rural work, covering 120,000 villages.

Animal husbandry and forests

Nearly 10% of India's cattle are unserviceable or unproductive. To relieve pressure on fodder resources, 150 cattle homes are to be built at a cost of Rs. 1 crore. Under a Key Village Scheme for improving breed, 600 centres are to be opened in different parts of the country for conducting breeding with specially selected bulls. Veterinary hospitals and dispensaries are to be increased from 2,000 to 2,600.

Efforts are to be directed towards afforestation to prevent soil erosion, and the establishment of village plantations for fuel and timber. As large areas in the country have been dessicated as a result of soil erosion, an organisation for soil conservation and land utilisation is to be set up at the Centre to undertake the co-ordination of soil conservation work, examination of State programmes and organisation of research surveys.

Available Water Resources

The proportion of irrigated area after the Partition to cultivated area in the Indian Union has fallen from 24 to 19 percent. To ensure progressively improving standards of nutrition it is necessary to double the area under irrigation within the next 15 to 20 years and to improve the standards of agricultural practice through the application of the results of scientific research to agriculture. During the past few years new irrigation and power projects have been taken up for construction, some for hydro-electric power, others multi-purpose in nature. These projects already under construction are expected to cost on completion Rs. 765 crores. An expenditure of Rs. 150 crores had been incurred upto the end of March 1951. During the five year period covered by the plan it is proposed to spend 518 crores on these schemes. These projects are calculated to irri-

gate an additional area of 8.5 million acres in the last year of the plan, and to generate 1.08 million kilowatts of power. In addition Rs. 40 crores have been provided for new schemes, including the first stage of the Kosi project (Bihar), the first stage of the Koyna project (Bombay), of the Chambal project in Madhya Bharat and the Rihan project in Uttar Pradesh. The total cost of these projects will be well over Rs. 200 crores out of which it might be possible to spend Rs. 40 crores during the period of the plan.

A national policy is needed for the development of irrigation and power, devised in the interests of India as a whole. Such works require modern technical methods with the help of foreign experts; and development of river valley schemes of different States have to be co-ordinated. The financial resources for such outlay are beyond the resources of individual States. Moreover, a fifteen year plan has to be evolved, as large projects take years to investigate and execute. Finances will have to be secured by a share by Government in the unearned increment of land, a revision of water rates and a revision of agricultural income tax. A levy of better contribution in land from the larger holdings will enable Government to settle persons whose holdings are submerged.

IV Cottage and Small-scale Industries: Village Industries

Village industries will have the best chance of developing on the basis of local demand. They should become the concern of the village community, with responsibility for developing local industries. Co-operatives of artisans have to be developed. It is necessary for the Central Government to have an organisation giving close attention to problems of village industries. It is proposed to constitute a Khadi and Village Industries Development Board composed mainly of experienced workers in the field of Khadi and village industries. Where there is competition between a large-scale industry and a cottage industry, a common production programme should be formulated, taking account of factors like efficiency, scope for development and employment potential. Such a programme might include reservation of spheres of production, imposition of a cess on a large-scale industry and arrangement for the supply of raw materials. Research is a continuous process in such a programme, and it will be necessary to discover problems and find answers through the invention of new implements and new techniques. The establishment of an institute for village technology is recommended, to carry out

new ideas and designs and indicate direction in which artisans could be trained.

Small industries and handicrafts

Small industries fall into two groups, those which represent traditional skill and those which are more recent and are connected with large-scale industries. Many of them can provide employment to women in their homes. The planned development of small industry is of equal importance with the planning of agriculture. As a first step programmes for a few selected industries such as wool development, sports goods, agricultural implements, woollen goods, brass ware, cycle parts, etc., are under preparation.

Trade in handicrafts is in the hands of middlemen who operate on a small scale and work to order. Export demand for handicrafts is an important element in the industry. Production programmes for handicraft goods should be based on the study of the requirements of foreign customers. Internal demand which is limited could be developed through State patronage and through the use of handicraft goods in the home. Consumers' co-operatives could be linked increasingly to producers' co-operatives, and the Central and State Governments could promote links between producers in India and large buyers abroad. A handicrafts board has been set up recently by the Central Government. Co-operatives and associations should be formed which would have the necessary knowledge and be in continuous contact with the technical and business problems of producers and artisans. They could give close attention to enforcement of standards of quality control, study of designs and materials, and solve the technical problems which hamper the work of the artisan.

The role of State purchase in promoting the development of cottage and small-scale industries is now well recognised. The stores purchase policy can encourage industry and raise its technical efficiency. The establishment of new townships is an important item in the Central Government's programme. It affords opportunities for careful study in determining lines of production and over all planning of programmes between large scale and small-scale industries. Exhibitions should be utilised for providing instruction in new techniques and designs.

V Industry and Communications

Industrial Policy

Improvement in agriculture implies that the surplus working

force on land is progressively diverted to industries and services. There is need also for an increasing diversification of the occupational structure. Government policy has been stated in the industrial policy resolution of April 1948. Industries like arms and ammunition, the production and control of atomic energy and railways are reserved exclusively for the Central Government. In the case of certain others like coal, iron and steel, aircraft manufacture, ship-building, telephone, telegraph and wireless apparatus further development has to be the responsibility of the State. The rest of the industrial field is left to private enterprise.

Development and management of public enterprises

The Plan provides for an expenditure of Rs. 94 crores on industrial projects under the Central and State Governments. The projects already under implementation will be completed, and provision has been made for a new iron and steel project estimated to cost Rs. 30 crores upto 1955-56, and Rs. 80 crores in all over a period of six years. Towards this project Government will provide Rs. 15 crores and the rest will be secured through indigenous and external capital. In addition the Plan provides a sum of Rs. 50 crores for development of basic industries.

The executives in charge of public enterprises should have a great deal of initiative, technical efficiency and should be accountable to the public, but should not be subject to governmental control in their daytoday administration.

Development in the private sector

Programmes of development in the private sector have been worked out in consultation with representatives of the industries concerned. The total capital investment necessary for industrial expansion in the private sector is estimated at Rs. 233 crores; about 80% of this investment would be in respect of capital goods and producer goods industries. Iron & Steel will take up Rs. 43 crores, petroleum refineries Rs. 64 crores, cement Rs. 13 crores, fertilisers, heavy chemicals and power alcohol Rs. 12 crores. Additional electric power generation in the private sector will involve an expenditure of Rs. 16 crores in the five year period.

Industrial Development 1951-56

Taking into account the investment needed by way of working capital and other items, the overall requirements of finance amount to about Rs. 707 crores for expansion in the public and private sectors taken together.

The targets worked out are as follows:

	Production in 1950-51	Production aimed at in 1955-56
Iron and Steel		
Pig iron	15.7 lakh tons	19.5 lakh tons
Finished Steel	9.8 " "	12.8 " "
Cement	26.9 " "	45.0 " "
Aluminium	3.7 " "	12.0 " "
Fertilisers		
Ammonium sulphate	46,500 tons	450,000 tons
Superphosphate	58,100 "	180,000 "
Locomotives	—	170
Machine tools	1,100	4,600
Petroleum refining		
Liquid petroleum	N.A.	403 million gallons
Bitumen	N.A.	37,500 tons
Cotton Manufactures		
Yarn	1,176 million lbs.	1,640 million lbs.
Mill cloth	3,708 million yards	4,700 million yards
Handloom	810 " "	1,700 " "
Jute manufactures	892,000 tons	1,200,000 tons
Agricultural Machinery		
(a) Pumps, power driven ..	34,300	85,000
(b) Diesel engines	5,500	50,000
Bicycles	99,900	530,000
Power Alcohol	5 million gallons	18 million gallons

The fulfilment of the targets depend on the availability of finance. It will be necessary to canalise available capital into high priority lines through control of capital issues. Licensing of industrial undertakings will also assist in directing investment along desired lines.

Foreign capital

Government's policy in regard to foreign capital contains assurances as to non discrimination, reasonable facilities for transfer of profits and repatriation of capital and of fair and equitable compensation in the event of nationalisation. Foreign investment should be permitted in spheres where new lines of production are to be developed or where special types of technical skill are required. Agreements for joint participation between foreign and Indian concerns should be subject to the approval of Government.

Industrial productivity and management

Since 1939 there seems to have been a significant fall in industrial productivity in India, due to deterioration in the quality of machinery, irregular supplies of raw materials, and deterioration in the standards of management and discipline

among workers. Improvement of productivity in the years to come must be a major objective. The managing agency system under which industries operate has come under severe criticism. The problem is complex. But the principle is clear: industrial management in a planned economy has to satisfy rigorous tests, and the responsibility of management is not merely to the share holders, but also to the public at large.

Mineral Resources

The plan surveys the resources, and points out that till recently the exploitation of minerals was largely for purposes of export. They were not regarded as a source of national wealth, the working and utilisation of which should be planned on sound and economic principles. As minerals form the basis of modern industry in peace and war, and as they are "wasting assets," it is necessary to adopt a policy of co-ordinated development, the keynote of which should be conservation and economic working. The Plan, accordingly, provides for the systematic investigation and survey by the Geological Survey of India, the Indian Bureau of Mines, the National Metallurgical Laboratory, the Central Glass and Ceramic Research Institute and the Fuel Research Institute. The programme includes detailed mapping of reserves, collection of detailed statistics of the economics of the mineral industry, physical and chemical survey of all coal seams, investigation on the benefication of low grade minerals, and on the manufacture of optical glass, ceramic wares, refractories and insulators.

Transport and Communications

In the programme for transport a large part of the total outlay is on railways. The most serious problem today is the task of rehabilitation and provision of adequate equipment with a view to reducing dependence on external sources of supply. A workshop for the construction of locomotives has been set up at an estimated cost of about Rs. 15 crores. The eventual production target in this workshop is 120 locomotives and 50 spare boilers per annum. Government have also assisted the Tata Locomotive Engineering Company by participating in its capital structure to the extent of about Rs. 2 crores. The Railway Plan for the five year period is to provide for an average expenditure of Rs. 80 crores, or Rs. 400 crores in the aggregate. Of the total expenditure of Rs. 400 crores, the Central Revenues will contribute Rs. 80 crores and the balance of Rs. 320 crores is to be raised by the Railways from their own resources.

The programme for shipping will increase the gross registered tonnage in the coastal and overseas trade to about 600,000 by 1955-56. The Plan provides assistance to the extent of Rs. 15 crores to shipping companies for the purchase of ships. As the present capacity of the five major ports is not sufficient to meet the requirements of traffic, a major new port will start functioning at Kandla which would take over some of the traffic formerly handled by Karachi. The cost of Kandla is estimated at Rs. 12 crores during the Plan period. For the modernisation of the five existing major ports assistance to the extent of Rs. 12 crores is expected to be given. This will be supplemented by the resources of the Port authorities which are estimated at Rs. 15.5 crores.

A sum of Rs. 27 crores over a period of five years has been provided in the Central Government's plan for the development of national highways. There is also provision for the construction of 450 miles of new roads and 43 large bridges. The total provision for road development in the plans of the States is Rs. 73.54 crores. Civil aviation companies are to be merged into a single unit for economic working, and a sum of Rs. 9.5 crores is set apart for the payment of compensation to the existing air companies and for purchase of new aircraft.

The total development programme for posts, telegraphs and telephones will cost Rs. 50 crores. There is to be a post office for every village with a population of 2,000 or over.

Foreign Trade and Commercial Policy

The higher agricultural production for which the Plan provides will reduce dependence on imports of food grains; and the greater availability of raw cotton and jute will increase the exportable surpluses of cotton and jute manufactures. Export trade will develop in new lines of manufacture, e.g., sewing machines, batteries, bicycles, electric fans and pharmaceuticals. On the other hand, a large programme of development leads to increased demand for imports and a shortage of foreign exchange. There will be heavy imports of capital goods, and also of consumer goods, due to increased money incomes generated by the Plan. The volume of imports will, therefore, have to depend on the degree of control exercised over them. During the period of the Plan there will have to be a close regulation of exports and imports. Commercial policy will have to be determined by certain broad principles. It must help to fulfil the production and consumption targets in the Plan. It must maintain a high level of exports. The deficits in balance of payments must be kept

within the Foreign Exchange resources at the disposal of the country. And the composition of exports and imports must fit in with the fiscal and price policies of the Plan.

Assessment of the Plan in terms of Income and Employment

A programme of development will be judged in terms of the improvement it is able to make to the welfare of the community. The usual indices of welfare are income, consumption and employment. National income statistics are still in their infancy. The data available on the occupational pattern are meagre. The national income, as a result of increases in production, is expected to go up from Rs. 9,000 crores to Rs. 10,000. Out of the annual rate of increase of about 2 per cent in national income, about one fifth will have to be ploughed back into investment year after year. The aggregate consumption expenditure will therefore rise at a somewhat lower rate than the national income.

In judging the likely effects of the Plan on employment, it is necessary to bear in mind that the problem in India is more one of under-employment rather than of unemployment as such. The problem of removing under-employment and of opening up employment at rising levels of real income is synonymous with the problem of development itself. The Plan will create more employment for those engaged on construction activity, and by building up capital at key points it will, at the next stage, enable a growing number of people to be absorbed into the productive system.

The Plan involves doubling the development expenditure of public authorities from Rs. 232 crores to Rs. 500 crores by 1955-56. About half of this increase might be absorbed in additional wages and salaries. No data are available on the volume of building activity in the private sector, but rough estimates suggest that net private investment on construction, using cement and steel, was probably Rs. 100 crores in 1950-51. Over the period of the Plan the output of cement and steel is expected to go up by about 80 and 40 per cent respectively; and there might be considerable additions to constructive activity in the private sector. Producer goods industries are highly capital—intensive, and the additional direct employment would be correspondingly small. In agriculture benefits of irrigation will accrue to about 19 million acres of cultivable land in this period. Where perennial irrigation is provided, opportunities will develop for double cropping, and this will help to reduce seasonal

unemployment. With rising incomes, effective demand will grow in the rural sector, and widen employment opportunities in small-scale industries.

In underdeveloped countries the problem of increasing income and employment is tied up with the problem of capital accumulation. The Plan aims at raising the investible surpluses from Rs. 450 crores in 1950-51 to about Rs. 675 crores by 1955-56. Basically the solution lies in tapping the large investment potential which lies in the unutilised manpower and other resources in the country; this is a question of organisation. Changes in the institutional framework and the organisation measures recommended in this report have, from this point of view, a vital significance.

VI Social Services and Employment

Health and Family Planning

Lack of hygienic environment (housing, water supply and removal of waste) and low resistance due to poor nutrition, lack of medical care and a low economic status are the main causes of the prevailing low state of health. Increased training facilities are of vital importance in view of the present shortage of personnel. The provision for medical and public health of the Central and State Governments amounts to Rs. 99.5 crores. Out of this Rs. 48 crores, nearly 50% will be on hospitals, and about 40% will be devoted to medical education and training. The execution of the programme is expected to increase the total number of personnel trained as below:

	Number trained		
	During 1950-51	Ending 1955-56	Percentage of increase
Doctors ..	2,504	2,782	11.1
Compounders ..	894	1,621	81.3
Nurses ..	2,212	3,000	35.6
Midwives ..	1,407	1,932	37.3
Vaids and Hakims ..	914	1,117	22.2

The increase in the number of hospitals and dispensaries and the number of beds in them is anticipated to be as follows:

	During 1950-51	By 1955-56	Percentage of increase
Number of hospitals ..	201	2,062	2.4
Number of dispensaries (urban)	1,358	1,695	24.8
Number of dispensaries (rural)	5,229	5,840	11.6
Number of beds in hospitals ..	1,06,478	1,17,222	10.1
Number of beds in dispensaries (urban)	2,013	2,223	11.4
Number of beds in dispensaries (rural)	5,066	5,582	10.2

The expenditure on public health programmes is Rs. 51.45 crores. Water supply, drainage and anti-malaria schemes account for the bulk of the expenditure. Of the total amount allocated to water supply and drainage Rs. 12.12 crores is for urban water supply and drainage and Rs. 11.37 crores for rural water supply. Rs. 7 crores in the States and Rs. 10 crores by the Centre are assigned to control of malaria.

The rapid increase in population and pressure on the limited resources available have called attention to the urgency of family planning. Limitation on the spacing of children is necessary and desirable, in order to secure better health for the mother and better care of the children. The programme for family limitation should obtain an accurate picture of the factors contributing to rapid population increase, discover suitable techniques of family planning, and devise methods by which knowledge of these techniques can be widely disseminated, and advice on family planning can be made an integral part of the service of Government hospitals and public health agencies. A sum of Rs. 65 lakhs has been alloted by the Central Government for a family planning programme.

Education

In the Plan education is regarded as part of the total national effort. In comparison with needs the available resources are inadequate. The principal requirements are the re-orientation of the educational system, integration of its different stages, expansion in basic and social education, women's education and training of teachers. The Plan provides about Rs. 151 crores for education, and a sum of Rs. 4 crores for assistance to voluntary social welfare organisations.

In the field of pre-school education, the Central Government should promote programmes such as research in evolving methods suited to Indian conditions, and assistance to private agencies to carry their work into rural areas, and running model institutions. The Plan contains recommendations for improving the existing system of primary education and expanding the basic system. Model basic institutions should be established in the States, comprising some pre-basic and basic schools, a post-basic school, a teachers' training school and a training college. Crafts should be introduced in existing primary schools. A large number of multi-purpose high schools are also needed, where encouragement may be given to agriculture and to cottage and small-scale industries. As regards University education the Plan

stresses the need to apply suitable tests for selecting those who should receive university education and to draw a large proportion of students into gainful occupations before they reach the University stage. Recruitment to public service should be by competitive tests, and the non-possession of a degree should not be a bar to taking a competitive examination.

In professional education provision is to be made for courses in printing technology, woollen and silk textile technology, and for business management and industrial relations. There should be expansion of training faculties at the artisan and craftsman level and organisation of refresher courses.

The Plan provides a sum of Rs. 1 crore for youth camps and labour service for students. Students between the ages of 18 and 22 should devote a period to disciplined national service. Some manual work should be encouraged at some stage during the course of education. A period extending from six months to a year can be devoted to irrigation works, roads, slum improvements, sanitation projects, etc. A beginning should be made with students taking the Master's degree.

Labour

Most of the rights of labour have been recognised in the Constitution. Since Independence many measures for the welfare of workers have been introduced, like the Bonus Scheme Act, the Minimum Wages Act, and the Employees State Insurance Act. In addition to the funds allotted for Housing and Resettlement Schemes for landless agricultural workers, about Rs 7 crores are to be spent on labour welfare during the period of the Plan. The recommendations of the Commission fall under four heads:

(1) In regard to industrial relations in the private sector the targets of the Plan imply harmonious relations between capital and labour. The worker must be enabled to take a greater share in the work of the industry. Trade Unions should be welcomed and helped as part of the industrial system. The rights of the worker to association, organisation and collective bargaining should be accepted as fundamental to the mutual relations of labour and capital. In the public sector the profit motive has no place. To arouse the worker's enthusiasm justice and fair play should be the rule, and the Plan should be discussed between the unions and employers. The unions can help in increasing production while the Plan is being executed.

(2) To check inflation profits and wages will need to be controlled during the period of the Plan. Wage increase should be

avoided, as it may raise the cost of production, injure economic stability and adversely affect employment. Standardisation of wages should be accelerated and extended. The Commission also visualise the constitution of permanent wage boards on a tripartite basis. The lack of social security prevents the building up of a stable and efficient labour force. This might be remedied by measures like the Workmen's Compensation Act, Maternity Benefits Acts and the Employees' State Insurance Act.

(3) As regards working conditions the Plan regards the Factories Act 1949 and the Plantation Labour Act, 1951, sufficient for the purpose of improving conditions, supplemented by legislation in respect of shops and establishments.

(4) For employment and training the Plan looks to the organisation of an employment service and provision of more facilities for training of workers. Manpower surveys should be conducted, and proper standards for technical training laid down.

Housing.

Information collected from 37 important towns in India show that out of a total population of 1.7 million engaged in large scale industries over 4 to 5 lakhs are without accommodation. Advance figures of the 1951 census show that the population of 74 cities in India increased by 7.4 million in the decade 1941-51 while the population of smaller towns increased by 14 million during the same period. The gravity of the housing problem is thus apparent.

A total provision of 48 crores has been made for housing in the Plan. Of this the Central expenditure will be Rs. 38 crores and the State expenditure Rs. 10 crores. The first priority is to be for building of houses in industrial centres where congestion and shortage are very acute. In this sphere the Central Government would assist, leaving State Governments to give greater attention to rural areas. Subsidies to State Governments for construction of houses for industrial workers should be to the extent of 50 per cent of the cost of construction including land. The balance of 50 per cent should be advanced by the Central Government as a loan, repayable within 25 years. The Central Government will assist employers of labour by a subsidy of 25 per cent of the cost of construction including land. A central housing board and regional housing boards are to be constituted for carrying out housing programmes.

Social Welfare

While the Central and State Governments and local authorities will undertake more direct responsibility than hitherto in respect of social welfare, voluntary agencies will have to share the major burden. A sum of Rs. 4 crores has been provided in the Plan for strengthening and expanding their welfare activities. A Social Welfare Board is to be set up for administering this fund. Training for social work is to be arranged, and a sum of Rs. 50 lakhs is set apart for research and investigation relating to social problems. Appropriate machinery is to be set up to review existing social legislation and suggest necessary modifications.

Voluntary agencies at present bear the main burden for the welfare of women. Attention of social welfare agencies is drawn to the need for diet of undernourished children, to child-guidance clinics, organisation of creches and maintenance and management of play grounds. Orphanages and similar institutions should be registered and supervised. Encouragement to the Scout movement, the National Cadet Corps and Youth Camping programmes is also indicated. Considerable emphasis is laid on the need for playgrounds. Family counselling and case work to be followed up by organised assistance are mentioned among the methods by which family welfare could be promoted.

Suggestions are also offered for utilising prisons to an increased extent as agencies for the rehabilitation of prisoners. Prisons should be reconditioned so as to provide proper arrangements for different classes of prisoners, such as women convicts, young offenders, etc.

The field of social welfare will expand in the measure in which local communities accept responsibility for solving their own problems. Community welfare programmes imply (1) self help and mutual service, (2) maximum use of local resources through organised community life, (3) economic betterment and cultural development through participation in co-operative effort and (4) achievement of community objectives with minimum assistance from the State.

Rehabilitation of displaced persons

After the Partition 5 million Hindus and Sikhs migrated to India from West Pakistan, and 1.5 million from East Pakistan. According to the 1951 census about 7.5 million persons moved into India. Agricultural lands left by Moslem evacuees were allotted

to displaced persons from West Pakistan. A small proportion were settled on recently reclaimed lands.

The urban economy in India does not offer scope for quick absorption of new elements. The Government of India have built 150,000 houses at a cost of Rs. 38 crores to the end of March 1952. Another 50,000 houses at a cost of Rs. 21 crores are to be built in the course of the next two years. The grant of building sites and loans to displaced persons has helped the growth of new townships.

Gainful employment of displaced persons has been achieved by providing service under Government and providing technical and vocational training to those fit for it, by construction of business premises, by grant of loans for business and financial assistance for education. Altogether 158,000 displaced persons from West Pakistan and 44,000 from East Pakistan had received loans to the end of March 1952. There are 74,000 displaced persons who are looked after by Government as a permanent measure, mostly in homes and infirmaries.

Upto March 1952 the Government had incurred a total expenditure of Rs. 90.5 crores on rehabilitation. Rs. 27.8 crores are proposed to be spent during 1952-53, and Rs. 29.1 crores during 1953-54.

Employment

In underdeveloped India unemployment is a result of shortage of land, capital equipment and other resources. It is not possible to assess the magnitude of the problem in quantitative terms. The main factors which have aggravated the problem are the rapid growth of population, the disappearance of old rural industries, inadequate development of non-agricultural sector and the large displacement of population as a result of Partition.

One of the main objects of the plan is to increase employment opportunities. In the rural sector the incidence of unemployment may be reduced by major and minor irrigation works, land reclamation schemes and the revival of village industries and handicrafts. The financial provision for this is Rs. 15 crores. In the urban areas the solution lies to some extent in the extension of existing large-scale industries and establishment of new ones.

The absence of accurate data makes it difficult to estimate the effects of the Plan on the employment situation. Estimates of additional employment opportunities which may be created in some sectors are as follows:

	Additional employment	
1. Industry including small-scale industries	400,000 annually	
2. Major irrigation and power projects	750,000 „	
3. Agriculture, due to additional area irrigated, repairs to tanks and land reclamation schemes	2,300,000 „	
4. Building and construction	100,000 „	
5. Roads	200,000 „	
6. Cottage industries	2,000,000 „	plus 3,600,000 will be provided with fuller employment.
7. Tertiary sector and local works ..	not possible to estimate.	

As the Plan places emphasis on increasing agricultural production, and at the same time on creating a base for industrial expansion, the immediate expansion of employment opportunities for the educated unemployed is limited.

CHAPTER III

THE NATURAL RESOURCES OF INDIA

With the Partition of 1947 the Indian peninsula, which was formerly composed of the territories of British India and the Indian States, has undergone a territorial transformation of a radical nature. India, or the Union of India has now become an integrated unit having for its boundaries the Indian Ocean on the South and the Bay of Bengal on the East. Its boundaries on the North and North-West, however. are constituted by the territories of Pakistan, Jammu and Kashmir, the Himalayan regions of Tibet, Nepal, Sikkim and Bhutan and the Pakistan possession of East Bengal. The Indian States have been merged into the Union under the Federal Constitution which provides for three classes of component units, known as A, B and C States. The A States are the former Provinces of British India and include Assam, Bihar, Bombay, Madras, Orissa, Madhya Pradesh (formerely the Central Provinces and Berar), East Punjab, Uttar Pradesh (formerly the United Provinces) and West Bengal.[1] The B States were formerly governed by Princes, who now act as Governors with the title of Raj Pramukh, and include Hyderabad, Madhya Bharat (formerly the States of Gwalior and Indore), Mysore, Patiala and East Punjab States Union (P.E.P.S.U.), Rajasthan (Jodhpur, Jaipur and other Rajputana States), Saurashtra (formerly the Kathiawad States), Vindhya

1 A new State of Ahdhra has been created recently, and this has been followed by demands for the re-organisation of a number of states on a linguistic basis A States Reorganisation Commission has been appointed to decide on the issues.

Pradesh, and Travancore-Cochin. The status of Jammu and Kashmir has still to be decided, with a possibly different relationship to the Union than that of other B States. The C States include Ajmer, Bhopal, Bilaspur, Coorg, Delhi, Himachal Pradesh, Cutch, Manipur and Tripura. The C States are administered through a Lieutenant Governor or Chief Commissioner, appointed by the President of the Union. In course of time the French and Portuguese possessions which are still outside the political jurisdiction of India will be absorbed within the geographical limits of the Indian Union. The changes brought about by the Partition in the boundaries of the Indian Union to the North West and North have resulted in the weakening of her strategic position, by removing the bottleneck of the Khyber Pass and laying open her possessions to a process of slow infiltration of hostile elements, if not to raids and attacks on a larger scale.

In the narrower sense, the natural resources include appropriable gifts of nature; but in the broader sense they include those aspects of nature like air, water, sun-shine, animal and vegetable life which satisfy human wants. They likewise include substances and forces which man has transformed for the satisfaction of his growing desires. Every invention which increases man's control over nature also increases the sum total of available resources. Man and his resources have been rightly designated functional reciprocals. Amongst these resources land, as surface land, was regarded as occupying the predominant position. The utilisation of land was the occupation of the majority of all peoples before the advent of the Industrial Revolution in the last century. The revolution that has occurred in the processes of production by the invention of the steam engine, the water turbine and the oil engine has brought about a change which has subordinated the value of surface land to that of coal, petroleum and the metals. Thus in the world of to-day the metallic industries play a larger part in the economic life of nations than industries connected with food and raw materials. But India's main industry is still agriculture. The natural resources for the development of heavy industries and the potentialities of an industrial civilisation which we possess contain the promise of an economy alleged to be infinitely superior to the agricultural economy which our country has hitherto enjoyed. An American Professor of Geology is confident that "with her coal, her iron, her man-power, India could share Asiatic leadership with China, or per-

haps assume the outstanding role in the industrial development of Asia."[1]

The Soil

India is almost a continent in size and possesses a great variety of soils and climates. Four different types of soils have been noted; (a) Black soils, suitable for cultivation of cotton and sometimes known as black cotton soils. These occur in Bombay, Saurashtra, and in parts of Madhya Pradesh, Madhya Bharat, Hyderabad and Madras. They contain potash and lime but are deficient in nitrogen, phosphoric acid and organic matter; (b) Red soils, to be found in the whole of Madras, Mysore, South East Bombay and in parts of Madhya Pradesh, Bihar, Uttar Pradesh and Rajasthan; (c) Laterite soils, which are deficient in potash, phosphoric acid and lime. These are to be found in parts of Orissa, Bombay, Malabar and Assam. They are derived by weathering of rocks under monsoon conditions; (d) Alluvial soils distributed in parts of Punjab, U.P., Bihar, West Bengal and the whole of the Indo-Gangetic plain. They are deficient in phosphoric acid, nitrogen and humus.[2]

The total geographical area of the country is 811 million acres. The acreage of land, however, for which statistics are available as regards use, is only 615 million acres. The rest of the land for which land utilisation statistics are not available consists of mountains, deserts and inaccessible forests. The agricultural resources of India, so far as the soil is concerned, may be estimated from the following table:—[3]

Land in the Indian Union in millions of acres in 1951

Classification	Acres	Percentage
Total area	**623**	**100**
Forests	93	15
Not available for cultivation	100	16
Fallow land	59	9
Other uncultivated land excluding fallow land	103	17
Net area sown	268	43

1 Charles H. Behre in an article on "India's Mineral Wealth and Political Future" in *Foreign Affairs*, October, 1943.

2 Census of India, Paper No. 2, 1952, p. 15.

3 Census of India, Paper No. 2, 1952, p. 18,19.

There are minor divergencies between the census figures and those supplied in the First Five Year Plan. The greatest difference occurs in the total area for which statistics are available (615 million and for other uncultivated land 96 million according to the Five Year Plan).

It is difficult to account for these divergences coming as they do from the same source. They add to the unreliability of statistical information, gathered from land records many of which are defective, and in some cases non-existent. As if to add to the confusion and make comparative studies difficult, we find a change in nomenclature, and sometimes changes in the bases of classification. Cf. "The apparent increase of about 3 million acres in the case of Bombay is due to reclassification of areas from fallows to fodder crop" (foot note, p. 154, The First Five Year Plan.).

It will be observed that if we exclude the area under forests, 61.7 per cent of the remaining land is under cultivation including fallow, whilst out of the remaining 38.3 per cent, deducting about 6 per cent for urban land at least about 32 per cent of land may be regarded as land that can be brought sooner or later under cultivation. The official classification of land under the head "not available for cultivation" is a little misleading. With modern scientific advances the line between cultivable waste (or other uncultivated land excluding fallow land) and land not available for cultivation will be more and more difficult to draw. Professors Bowley and Robertson have also pleaded for the abandonment of the imaginary and misleading distinction between these two. Current fallow can be reduced by better rotation. Cultivable waste can be brought under the plough by reclamation schemes.[1]

In a country like the U. S. A. where the economic prospects of agriculture have been changing, due to decline in the birth rate and decrease in exports of farm products, the Hoover Committee on Social Trends called attention to the vast reserves of land which could be put into crops after clearing, drainage and irrigation amounting to 300,000,000 acres, and another reserve of 300,000,000 devoted to pasture which can be cultivated by ploughing and planting. There is no room in this classification for land not available for cultivation. The problem in the U. S. A. is the problem of expansion in non-agricultural uses of land, whilst ours is primarily a problem of expanding the use of land for agricultural purposes.

Rainfall

Rainfall in India has been very often linked up with the recurrence of scarcity and famine conditions in various parts of the country from year to year. In Assam and in the parts bordering on the Western Ghats, we have the regions of ample rain. Differences of temperature are not very great in parts where there is heavy rainfall. In Southern India we have regions of uniform warmth, whilst in the West and the North-

1 "One curious thing in India is that according to the Government statistics one-third of its cultivable land lies idle—not fallow.... This cultivable land in many cases has never been cultivated, partly because the people insist on leaving large areas uncultivated to graze their cattle. In some parts of India large areas of good land lie uncultivated also because of bad government....and some of the waste land is simply land that has not yet been turned and improved.... With modern methods of erosion prevention and soil reclamation, much of the so-called uncultivable waste of India can be brought into profitable cultivation." Sam Higginbotham 'India's Agricultural Problems,' Institute of Pacific Relations, N. York, 1942, p. 29. Quoted in *Pacific Affairs* June, 1942 by S. Chandrasekhar in 'Population Pressure in India.'

West, there are marked differences of heat and cold. In the North and the North-West, there are two clearly defined crop seasons, namely, the rainy season (Kharif) and the cold season (Rabi). In Bihar and parts of Bengal there are three seasons, the early rainy season, the late rainy season and the cold season.[1] Systems of cultivation vary according to climate. Rice is grown abundantly in the tracts of heavy rainfall, like Bengal and parts of Bihar, while in districts like Khandesh, rice is replaced by cotton and millets.

From the point of view of rainfall the country may be divided into three tracts—(1) districts with an abundant rainfall like Assam and districts adjoining the Western Ghats; (2) the Madhya Pradesh and a great portion of Central India with sufficiency of rainfall and a black soil which helps in retaining moisture; (3) the dries regions of the country—the plains of the Punjab and Rajasthan. The districts which are most liable to famine are those where the cultivator is tempted to risk the growing of a crop, due to the uncertainties of rainfall. These extend over a great part of Rajasthan, the Deccan and Madras. In other parts like the Punjab the cultivator never grows a crop unless there is certainty of water supply. In Assam the annual rainfall ranges between 90 and 160 inches. In parts of Bombay, like the coastal areas and districts bordering on the Ghats, the rainfall varies between 60 and 90 inches. It has also to be noted that there are remarkable divergences in the annual rainfall, not only in different parts, but also within quite limited areas. There is an average rainfall of 425 inches at Chirrapunji in Assam, while in some parts of Rajasthan the average is less than 5 inches. At Segowlie in Bihar their is a rainfall of 80 inches yearly; nine miles away to the West at Rajghat it is 45 to 47 inches, and twelve miles south-west of Rajghat it is 26 inches.

The following table gives the 'normal' annual rainfall in inches in Part A States:

Assam		99.73	Madhya Pradesh	Berar	33.66
Bihar		51.25		Madhya Pradesh	52.20
Bombay	Deccan	32.89	Madras	North Coast	38.25
	Gujarat	37.04		Deccan	23.98
	Konkan	107.50		South East	36.48
	Saurashtra and Cutch	19.84		Malabar	108.29

1 In Bengal there are three rice crops (1) Aus, or autumn crop, on high lands, sown in April or May and harvested in August or September; (2) Aman, or winter crop, on low lands, sown in May or June and harvested in December or January; and (3) Boro, or summer crop, sown in depressions and swamps in January or February, and harvested in April or May.

Orissa	58.98	Uttar Pradesh	38.95
Punjab	24.11	West Bengal	63.14

But there are often large deviations from this 'normal' which prove very upsetting to the agriculturist. (e.g. The variations from the normal ranged between +44 in Berar and —19 inches in Rajasthan in 1949.) The capriciousness of rainfall in India manifests itself in a variety of ways. The monsoon may start late, or heavy rains in July and August may delay agricultural operations, or the rains may not be sufficiently prolonged and distributed. There is hardly a year when partial or total famine conditions do not occur in some part or the other of this vast country. There is nothing unnatural if the people of this country, dependent as they are upon the caprices of rainfall, have acquired a temperament that makes them easily reconciled to constant changes of fortune, a temperament bordering on fatalism. Afforestation and irrigation are the two main devices to help this situation.

Forests

Forests may be classed in the category of renewable natural resources. The real value of forests for agricultural prosperity consists in their lowering the temperature and enabling the soil to retain moisture. They are helpful in condensing clouds and bringing rain. The forests preserve and even increase the fertility of the soil by storing water and preventing floods. Thus the frequent floods in Orissa have been attributed to the deforestation of the hill slopes of Chota-Nagpur. "By checking erosion they prevent good soil from being washed into rivers and carried away to waste." "They are a valuable asset in times of famine, for they yield vast quantities of fodder and provide edible fruits and roots." In a country like India forests are capable of supplying wood for fuel and the sources of charcoal for domestic and industrial use. The timber from the forests can be utilised for the manufacture of agricultural implements, and the leaf mould gathered from the forests constitutes an important source of manure. Forests, moreover, under an improving economy have been found to be a chief source of paper supply. From 80 to 90 per cent of the world's paper today is made from wood fibre. Chemists tell us that the future will be an age of cellulose, in which forests may play a dominant part.

Realising the importance of forests in the economy of the country, the Forest Policy Resolution of May, 1952, suggests that

"India as a whole should aim at maintaining one third of its total land area under forests. As an insurance against denudation, a much larger percentage of the land, about 60%, should be kept under forests for their protective functions, in the Himalayas, the Deccan and other mountainous tracts liable to erosion. In plains, where the ground is flat, and erosion is normally not a serious factor, the proportion to be attained should be placed at 20 per cent; and in view of the pressure of agriculture, efforts at the extension of free lands should be concentrated on river banks, and other convenient places not suitable for agriculture."[1]

In 1949, 74 million acres out of a total area of 663 million acres in the Indian Union were covered by forests. "Indian Forests Statistics" puts the area in 1949-50 at 147.7 million acres, i.e., 18 per cent of the total land area. The "Statistical Abstract" for 1950 puts the forest area for 1948-49 at 13.5 per cent of the total land area. As the Planning Commission observe, "accurate statistics of the area under forests are not available."

A clearly defined national policy, as adumbrated by the Resolution of 1952 is likely to be upset, however, by the desire to make India self-sufficient in the matter of food—a short term planning in the direction of converting forest land into agricultural land. In Madhya Pradesh, Uttar Pradesh, and Travancore-Cochin areas covered by forests have been known to be cleared for growing more food. A mere ceremonial planting of trees, once in a year, will not be as effective as a national policy of planting forests under Governmental direction.

Forests are classfiied for administrative purposes as reserved forests, protected forests and unclassed.

"Reserved" forests are Government property. "Protected" forests are those over which Government have proprietory rights, but which are not included in reserved forests. Government may declare any class of trees reserved, or close any part of the forests for a term not exceeding 20 years. All other forest lands under the control of the Forest Department are designated "unclassed" forests. There are in addition, quite large areas which are not under the Forest Department. On the abolition of Zamindari and Jagirdari tenures about 40 millions acres of forest land will vest in State Governments.[2]

The most valuable product of the Reserved forests is timber, which supplies not only the internal demand for bodies like the

[1] "The First Five Year Plan," p. 285.
[2] Ibid, p. 286.

Railways, but also foreign markets in Europe.

The following table shows timber resources from forests over the last few years in undivided India:—

Timber and Fuel Out-turn in millions of cubic feet

1927-28	370	1937-38	280
1930-31	323	1938-39	285
1933-34	317	1939-40	294
1936-37	376		

During 1945-46 production of timber and fuel increased by about 62 per cent over the pre-war triennium. For 1948-49 the out-turn of timber and fuel in the Indian Union was 359.6 million cubic feet. It may be noted that we import about 1.2 million tons, i.e. 60 million cubic feet of timber per annum. War requirements had led to great increases in timber production. Since then it has decreased. It is now about 1.8 million tons per annum.

A conference of foresters held at Dehra Dun in 1942 revealed how India can be independent in respect of forest products. India depended for teak wood on Burma. An engineer from Maharashtra claimed to have ended the era of tutelage to Burma teak and American ash and hickory. The war had displayed India's humiliating dependence upon foreign resources in respect of handles for tools. A botanist and a wood technologist from Bengal conjointly with a Welsh silviculturist co-operated in determining suitable woods for aircraft building. A specialist in seasoning from the U. P. and a wood preservation expert from Mysore solved problems that enabled India to get along without imported plywoods, battery separators, shuttles used in cotton and woollen mills and the like.[1]

When we look to these enormous potential resources in the shape of forests, the contrast of what might be and what is appears very striking. The training of Indians in forestry was started in our country as early as 1878. Efforts were made by Government in some directions like the production of paper on a commercial basis. But we are still largely dependent on foreign supplies of paper when we could be easily self-sufficient. The potentialities for the industrial utilisation of our immense forest resources which the Government of India called "Minor Products" still remain potentialities. The total value of Minor Products in 1943-49 was 368 lakhs of rupees only. Apart from paper manufacture there are promises in the future

1 *Modern Review*, December 1942, p. 445.

for the production of rubber, turpentine oil and medicinal herbs which demand from us to-day, not only that we must not allow unrestricted destruction of forests, but that with the help of our government we must undertake the extension and development of existing plantations, and make provision for more reserves and new plantations.

Water and Irrigation

In a country like India, where there are vast regions entirely dependent on rainfall, with a total rainfall entirely inadequate for agricultural purposes, it is a truism to state that agricultural production and development will be largely determined by facilities in the shape of irrigation works. Even where the rainfall is abundant for agricultural purposes production will depend on adequate and well-distributed rains. Irrigation, moreover, is necessary for growing winter and rabi crops. India has been favoured by nature with advantages that are not met with to the same extent in other parts of the world. The perennial rivers, like the Indus with its tributaries and the Ganges fed by Himalayan snows, offer potentialities for irrigation which are unparalleled when combined with the rich alluvial soil. Years ago Sir Charles Trevelyan observed, "Irrigation is everything in India; water is more valuable than land, because when water is applied to land it increases its productivity at least six-fold and generally a great deal more; and it renders great extents of land productive which otherwise would produce nothing."

The canals in India known as the major works are of two types—the inundation canals which take in water whenever the river is in flood and which cannot, therefore, be useful during the dry period, and the perennial canals of which the most important is the Sukkur Barrage Scheme, now in Pakistan, with its dam about a mile wide across the Indus.

Apart from canal irrigation we have irrigation by wells and tanks. In India from the remotest times we have evidence of tanks being in use constructed by the co-operative labour of the village community, and generally filled by the monsoon run off. In the South, there are still in working order tanks built by the rulers of the day a thousand years ago, irrigating three to four thousand acres each. "Terrace" irrigation likewise prevails in parts of India, largely serving local needs. Irrigation by wells is to be found everywhere in the country. It is suited to the poverty of the cultivating classes, cheap to build and easy to

work. The ingenuity of the Indian farmers shown in the various devices for raising well water can hardly be excelled; and so long ago as 1893 Dr. Voelcker was tempted to observe, "Nothing in the agriculture of India impressed me so much as the excellence of the cultivation carried on by irrigation from well."[1] The preference of the Indian farmer for well water in parts of the country where both canals and well water are available led Voelcker to analyse the composition of specimens of well water and canal water. This analysis revealed the fact that, whilst canal water had only 15 grains of solid constituents to the gallon, well water had 82 grains, and was found to be rich in soda, nitrates, chlorides and sulphates. Well irrigation accounts for more than a quarter of the irrigated land in India.

From early days the importance of irrigation was recognised by the rulers of India. The construction of tanks and wells was regarded as an act of great social, if not religious, merit. The canals constructed in the Moghal period still bear evidence to the forethought of the rulers of the day. But whilst as early as 1880 the Famine Commission laid stress on the urgency of irrigation projects as the most effective measure of protection against famine, nothing substantial was done in the shape of irrigation works till camparatively recent times. Most of the capital resources raised by Government were spent on the development of railways. The importance of irrigation in India cannot be exaggerated. The extension of irrigation to dry tracts, so far as major works are concerned, will entirely depend on planning by our Government.

The history of irrigational schemes in India under British Rule is a story of planless and unco-ordinated efforts by a Government which failed to realise the potentialities of offering irrigation facilities to a country where water has been said to be more valuable than land. As early as 1815 Lord Hastings recognised the value of irrigation works. In 1850, Dalhousie wrote in a minute : "Everywhere where I found lands of vast extent, fertile properties now lie comparatively waste, but wanting only water to convert them into plains of the richest cultivation." The years that followed were years of neglect, in spite of the urgent pleadings of the Famine Commission of 1880, and of the Irrigation Commission of 1901. To what extent the claims of irrigation were subordinated to a policy of capital

1 Report on Agriculture, p. 73.

expenditure on railways is evidenced by the fact that whilst the capital expenditure on irrigation and navigation works amounted to Rs. 150 crores in 1934-35, the expenditure on Railways amounted in the same year to Rs. 885 crores. If a well-planned irrigation policy had been laid down and followed from the beginning, this country would long ago have stepped out of her precarious dependence on the freaks of the monsoon.

The following table will show the area under irrigation in India in 1948-49:—[1]

Types of irrigation	Area under irrigation (000) acres	Percentage	
By Canals (Govt.)	16,039	34.2	
By Canals (private)	4,518	9.6	
By Tanks	7,644	16.3	
By Wells	12,684	27.0	
By Other Sources	6,082	12.9	
Total	**46,967**	**100**	
Net area sown	**243,832**	**19.3**	Percentage of irrigated land.

Power Resources: (a) Water power

The total water power resources of the world have been estimated on the lowest estimate at 500,000,000 H. P. The estimates for Belgian Congo are given at 90,000,000 H. P., the U. S. A. at 38,000,000 H. P. and for India at 27,000,000 H. P. The industrialisation of countries like Japan, Australia, Russia and China is perhaps the most noticeable aspect of electric power development. Electrification has also a highly desirable effect on industrial activity, in so far as it spreads out this activity over the entire area of the country and thus avoids the concentration of population in over-grown cities. The hydro-electric installations in India today include the Tata Hydro-Electric Works which supply the city of Bombay and its textile industry with a capacity of 250,000 H. P. The Pykara Works in South India with a capacity for generating 120,000 H. P., the Sivasamudram Works which supply power to the Kolar Gold Fields, and the Mandi

[1] Statistical Abstract of India, 1950, p. 507. (Govt. of India Publication, 1952). Prof. C. N. Vakil gives us the revised figures as based on statistics for 1938-39.

	Cultivated Area Million acres.	Irrigated Area Million acres.	Percentage of irrigated to cultivated area
India	251	47	18
Pakistan	54	20	36
Hyderabad	30	2	7
Kashmir	2.3	1	4
TOTAL	338	70	21

It will be seen that Pakistan has 36% of irrigated land in its territories, whereas the Indian Union has only 18% of the cultivated area under irrigation. Most of the irrigated area in Pakistan is located in West Punjab and Sind.

"Economic Consequences of Partition" (1948) p. 13.

Works which supply power for lighting and domestic purposes to some of the towns in the Punjab are other works which can be noticed in this connection. Besides these, there are the Hydro-Electric Works connected with irrigation, on the Upper Ganges Canal with a capacity of 48,000 H. P. The power generated by falls on the canal is connected through a grid which serves some of the towns of the Utter Pradesh. In a country like India with limited supplies in the shape of oil or coal, the generation of cheap power for industrial purposes has the utmost importance. It is only a very insignificant portion of our total water power resources that has so far been tapped. According to the National Planning Committee Report,[1] only 1.4 per cent of the potential hydro-electric power has been developed upto 1942 as against 15 to 90 per cent in most of the European and American countries. The Agricultural Commission pointed out that electrical power has two uses for agricultural purposes, namely, power for machinery including pumps, and as a means of obtaining supplies of synthetic nitrogen from the air.[2]

India has vast potentialities of hydro-electric power and may be said to be one of the leading countries in the world in its potential resources. The industries in India absorbed over 3 million kWh in 1951.

It is estimated on a conservative basis that the minimum flow of the 7 great rivers eastward from the Indus is capable of yielding not less than 3 million H. P. for every 1,000 feet of fall from the Himalayas, while the same applies to rivers in other parts of India. It is stated that a horse in form of electricity, steam and petrol works for 10 hours per day per man for all the 365 days in the year. Our country still depends mostly on manpower. The output of work is thus about 1/20th, as the work output of horse is ten times larger than that of men who at best work for 8 hours per day for 300 days in the year. Our backward position can be seen from the *per capita* consumption of electricity of various countries. The First Five Year Plan tells us that whilst the average consumption of electricity *per capita* is 1100 kWh in the United Kingdom, 2207 in the U. S. A. and 3905 in Canada, the average *per capita* consumption in India is only 14 kWh per year.[3] The total kWh generated

1 Edited by K. T. Shah "Power and Fuel" p. 10.

2 Report, p. 362.

3 First Five Year Plan. p. 345. The July 1951 number of *Irrigation and Power* gives us comparative figures of power statistics for power produced by hydro-steam, gas and oil. According to these statistic Norway heads the list with a *per capita* consumption of 4350 kWh, and Canada comes next with a *per capita* con-

in India has increased from 2,500 million kWh in 1939 to 5,100 in 1950. The Planning Commission estimate the addition of 1.08 million kWh to power production in the last year of the plan and of 1.4 million after the completion and full development of the projects. According to Prof. Wolman the mean annual utilisation of water for agriculture and other purposes is approximately 433,000 cubic feet per second, or less than 6% of the available power. "94 per cent of this liquid gold runs to waste to the sea."[1]

By a systematic planning of her hydro-electric power resources, Sweden is now practically independent of foreign coal supplies. Similarly, countries like France, Italy, etc., with poor coal resources have developed their hydro-electric power to a very great extent. The most inspiring example is that of Soviet Russia whose power development increased seven times in a period of ten years. This tremendous development was due to Lenin's plan of electrification which he termed an important element of Socialism. This planned economic electrification on a huge scale has enabled Russia to become a highly industrialised country within a short period of less than two decades.

Whatever power resources are developed in India, they are by private companies which, due to their monopolistic position have continued to exploit the consumers without any idea of developing these resources with a view to the general development of the country. "The monopolistic exploitation of consumers is generally the mainstay of the private companies, but even the bigger concerns have not shown much anxiety to develop the consumer demand by the gradual process of rate reduction. The private licensee companies have been paying huge dividends from year to year, and even in the recent depression they have managed to earn profits. Where dividends are declared, profits are put to reserves, or the cost-accounting is so manipulated as to show low profits or losses."[2] Cheap electric power can easily be made the basis of our industrial development. Power resources are social or communal resources, and must be fully developed and conserved with a view to the development of the country as a whole, and not to swell the

sumption of 3536 kWh. Even a country like the Phillipines has a *per capita* consumption of 22.5 kWh. while India's *per capita* consumption is only 14 kWh.

1 "Utilisation of Surface, Underground and Sea Water" in UNSCCUR proceedings, Vol, IV, Water Resources, (1951), p. 101.

2 B. P. Adarkar, "The Need for Beneficent Electricity Legislation in India," in Symposium on Problems of Power Supply in India, Special Number published by National Academy of Sciences, Allahabad, 1938, p. 61.

pockets of a few. The only sound policy is one of nationalisation and development of these resources on a systematic plan.[1] A proper utilisation and husbanding of these vast potential resources would easily revolutionised our economy. Realising the importance of such a policy our Government has set up a Central Waterways, Irrigation and Navigation Commission to ascertain our water power potential—surface and underground—, and prepare and execute planned projects, like the Damodar Valley and Mahanadi and other Projects. It is estimated that, on the completion of all these projects, about 75 million acres of land will be irrigated and 1.4 million kW of power will be added.

As against these natural resources, like forests which are renewable, we have now to consider non-renewable mineral resources of which there is in the earth's womb a limited quantity, and the exploitation of which has, therefore, to be planned with an eye on the long run interest of the present as well as future generations.

(b) Petroleum

After the separation of Burma, India can claim very little in the shape of oil resources. There are, however, wide areas in Assam, along the foot of the Himalayas and in Cutch and Kathiawad which offer prospects of oil extraction. India at present produces only about 7 per cent of her total oil requirements. The total output from Assam is about 61,000,000 gallons. The League of Nations Year Book gave us as India's share of production of crude petroleum 325,000 metric tons in 1940, as compared with 1,000,000 tons from Burma, and a total production of 293,000,000 tons for the whole world in the same period. The United Nations Year Book for 1952 gives us 550,000,000 metric tons as the world production for 1951, but the latest figure for India is for 1946, and is indicated at 301,000 tons.[2] Oil production in India is confined to the North Eastern Assam Oil Fields worked by the Assam Oil Company, a subsidiary of the Burma Oil Company. The imports of oil in 1947 amounted to 662,000,000 gallons

1 Government have passed the Electricity Supply Act, 1948, to provide for Nationalisation of the industry and assist in the rapid electrification of the country. It provides for Provincial Electricity Boards in States to control generation of electricity by licenses. A Central Electricity Authority has already been established to exercise close scrutiny of the work of the State Boards and advise them regarding schemes of power development.

2 Prof. C. N. Vakil gives us figures regarding petroleum production in India and Pakistan (op. cit., table 12, p. 195).

	India (in million gallons)	Pakistan (in million gallons)		India	Pakistan
1944	82.3	15.2	1947	65.2	—
1945	69.7	13.0	1948	66.0	33.3
1946	64.9	11.0			

valued at 32 crores of Rupees.[1] The occurrence of natural gases in the Himalayan regions and observation of the general geological layout both suggest the existence of oil in the vast alluvial plains of North India. The geodetic researches of the Survey of India as well as a certain amount of prospecting work carried on by interested foreign companies have recently revealed possibilities about the existence of oil in the plains and foot-hills of North India.[2] The abundant supply of power grade coal in the coal fields of Bihar can be utilised for the manufacture of synthetic petrol to meet our increasing demand for fuel oils.

(c) Coal

The coal resources of India have been estimated at 60,000,000,000 tons, but two thirds of these lie too deep for profitable working under present conditions.[3] India's production of coal has increased from 22,000,000 tons in 1931 to 30,000,000 tons in 1940, including the Indian States. The output has risen, since then, to 34, 431,000 tons in 1951, an increase of 2,124,000 tons over that in the previous year. About 1,900,000 tons were exported in 1951, as against 900,000 in 1950. While India produced 34,984,000 metric tons, the U. S. A. production in 1951 was 516,871,000 metric tons. The Raniganj and Jharia Fields in the district of Burdwan are our primary sources of coal supply. The railways absorb over 30 per cent of our total production. According to the estimate of Dr. Fox the total reserve of Gondwana Coal alone is 60,000,000,000 tons of which, 20,000,000,000 tons may be taken as occurring in workable seams. Of this, good quality coal (with ash not exceeding 16 per cent on a moisture-free basis) amounts only to about 5,000,000,000 tons, while good quality coking coal amounts to 15,000,000,000 tons. This coking coal is mainly to be obtained from Jharia, Giridih, Raniganj and Bokaro fields. The tertiary coal-fields contain about 2,000,000,000 tons in Assam and 300,000,000 tons in other areas. Except for a few fields, namely, Jharia, Raniganj, Giridih and Bokaro the data are as yet meagre; and a maximum depth of 2,000 feet has been taken into account for calculations relating to Jharia and Raniganj coal-fields. The total world reserves are now probably of the order of 7,000,000 million tons and India's share is only about 1 per cent of the total. At present we have

1 Of this amount, about 20 per cent was the share of Pakistan, leaving for our consumption 584,000,000 gallons (including 54 million gallons produced in Assam).

2 *Science and Culture*, October, 1942.

3 Of these only 5,000,000,000 tons are known to be of high grade, a third of this amount being considered suitable for conversion into coke for metallurgical purposes.

very little knowledge regarding the actual amount of coal reserves in the various coal-fields of India. More intensive and thorough survey work is necessary to get the correct estimate of our total coal reserves. Moreover, the existing methods of mining and extraction raise only 50 per cent of the coal. Improved methods of mining and extracting will maximise coal output and also increase the life of these coal fields.[1]

The following table is of some interest as showing the trend of world power production:—

Sources of Power	1913	1920	1925	1931	1937	1950
			(in percentage)			
Coal ..	88.5	82.1	75.5	66.5	68.8	57.1
Oils and gas ..	7.2	11.7	16.1	21.1	25.4	37.1
Water Power ..	4.3	6.2	8.4	12.4	5.8	5.8
Total	**100**	**100**	**100**	**100**	**100**	**100**

"The world production of the chief energy sources has increased steadily since the first world war, although at different rates. The great development of automobiles, aircraft and mechanical appliances is reflected in a continuous expanding market for petroleum. Natural gas which is produced and mainly used in the United States has had the most rapid advance. The expansion of water power for electric power generation has tended to slow up since the thirtees after rapid development."[2] It has, however, a bright future in view of its large potential resources and the exhaustible nature of the mineral fuels. Due to lack of adequate coal and oil resources, we have to concentrate on the development of our water resources which are potentially very great.

Industrial Ores; (a) Iron

India has perhaps the world's largest resources of high grade iron ore. Its total resources are estimated at 10,000,000,000 tons. The richest deposits of iron ores are found in Bihar (largely in Singhbhum).

Rich ores are to be found in Madhya Pradesh and Madras. But they have not been worked, mainly, due to the absence of coal in the vicinity. In the Rajhari Hills in Drug District, M. B., which extend to twenty miles in a zigzag line, no less than 7½ million tons of iron ore are estimated as being on the surface. According to the Imperial Mineral Resources Bureau there are inexhaustible quantities of iron ore in the Salem and Nellore districts of Madras. The proximity of a good quality

1 "Symposium on Coal in India," in *Science and Culture* October 1939.
2 G. A. Lamb, "Fuel Complex—A Projection" in the *Annals*, May 1952.

of coal to the iron deposits must be regarded as a principal factor making for the rapid development of the industry. The following table shows the growth in the production of iron ore:—[1]

In thousands of metric tons

Year	1932	1939	1942	1947	1948	1949	1950	1951
Quantity	1,144	1,930	2,083	1,625	1,483	1,824	1,929	2,378

Apart from the existing demand in the country as evidenced by large imports from abroad in the past, the increasing industrialisation of the country makes it certain that the demand for iron and steel will rapidly increase as the years pass; for, this is one of the basic industries, the development of which conditions the development of almost all other industries.

(b) Manganese

In the production of manganese India occupies a position second only to that of Russia. Our ores which average 50 per cent and more are richer in manganese content than the Russian ores whose average is about 45 per cent. The development of manganese mining is closely related to that of the steel industry; and as India is not a large producer of steel at present about 85 per cent of our output of manganese is exported. In 1947 the production of manganese ore in India was 451,000 tons. Only 17 per cent of this output was consumed in the steel industry of India; the rest was exported. The output increased to 1,284,000 tons in 1951; the exports absorbed 952,000 tons. The greater portion of exports goes to the hard currency areas. Our manganese deposits are mostly to be found in Madhya Pradesh, Bombay, Mysore and Madras.[2] Though we still retain our position in world output, we are gradually being outstripped in world production of manganese of high grade, i.e., 30 per cent or more content by the increasing output in other countries excluding the U.S.S.R. as seen from the following table:—[3]

Years	World output in millions of metric tons	India's share percentage
1932-35	1.8	40
1936-40	6.3	36.5
1941-45	6.0	23.0
1946-50	6.2	21.5

The importance of manganese may be judged by the fact that it is extensively employed in the manufacture of steel products like gearing, rollers, roller-axles, railway bolts and

1 Statistical Year Books of the United Nations, 1952 and 1953.

2 Under the Partition scheme the Pakistan area has no manganese nor iron deposits known so far.

3 Calculated from U. N. Statistical Year Book, 1952.

power transmission chains which require high tensile and resistant strength. India is one of the main sources of manganese in the world; but with the exception of a small amount used locally for making ferro-manganese, and as additions to the blast furnace charge, it is all exported at ridiculously low prices. Indian manganese ore of 50 per cent grade fetched Rs. 10 per ton at the pit's mouth whilst the price of ferro-manganese was £15 (Rs. 200) to the ton. No serious attempt has yet been made in India to utilise the manganese ore for the manufacture of ferro-manganese of good grade.

(c) Mica

Amongst the minerals used for industrial purposes must be included mica in which India is exceedingly rich. The enormous development of the electrical industry, which has taken place during the present century would hardly have been possible but for the availability of mica. The chief areas of mica deposits in India are those of Hazari Baug in Bihar and Nellore in Madras. The mica belt of Bihar, which supplies about 80 per cent of the world's requirements of better quality sheet mica, covers a strip about 60 × 12 miles. India's production of mica increased from 130,363 cwts in 1946 to 136,308 cwts in 1947. Figures of production in subsequent years are not yet available. According to Dr. Dunn,[1] over 1½ lakh of people are employed in this industry. The mica mines of Nellore cover a track of 60 × 10 miles. Due to the absence of a well established electrical industry most of our mica production has been exported. Over 90 per cent of mica splittings used in the manufacture of micanite. and made from lower quality mica, are supplied from India. The outbreak of the war affected the mica trade and brought a set back to the industry in the earlier stages, followed by a boom which led to reckless and uneconomic exploitation of this vital mineral. Public agitation resulted in the appointment of a committee by the Government of India. The importance of this mineral can be judged from the fact that the total value of mica exported from India was Rs. 4,65,89,000 in 1947, 326,342 cwts. valued at Rs. 9,07,45,868 were exported in 1950, the U. S. A. being the chief customer purchasing about 70 per cent of the total export. It is deplorable that a commodity so vital to defence and internal industrial needs, and of which India can boast 75 per cent of the total world production, should find itself in a condition of depres-

1 Bulletin on Mica, "The Geological Survey of India."

sion. Mica is absolutely indispensable in the production of electric machinery; and so long as India is the chief source of 'block mica' which is mostly demanded by the electrical industry, the future of mica industry is quite hopeful. With the proper development of the electrical industry in our country, more mica will be consumed at home.

(d) Bauxite

Bauxite is an important source for aluminium. We have large resources in bauxite in different parts of the country. The Geological Survey of India has during recent years carried out a comprehensive survey of the extent of Indian bauxite deposits. In 1937, a commission of experts visited all the known bauxite deposits and investigated the various sources of electrical power, with a view to the possibilities of aluminium production in India. These are roughly estimated at 250,000,000 tons including all grades. High grade reserves are about 35,000,000 tons. The first aluminium ingot was produced in India in 1943, obtained by reducing imported alumina, but its now being produced partly from Indian bauxite. 3,223 tons of aluminium were produced in 1947. In 1951, 67,000 tons of bauxite were produced and consumed at home.

New deposits of bauxite have been found in Jashpur to the west of Chhota Nagpur plateau. In Upar Ghat, in various parts of the Khuria highlands, e.g., Pandrapat, Thutopani and elsewhere in Jashpur both bauxite and aluminium laterite have been found to occur. All the laterite areas are not yet mapped out, and so there are possibilities of further discoveries. Besides aluminium oxide, the deposits contain oxides of iron, calcium and magnesium. The percentage of aluminium oxide varies from 50 to 60. According to Mr. Dey, titaniferous bauxite of good quality is available in several parts of the State and can be successfully exploited. The main difficulty lies in the absence of facilities for cheap transport to the nearest railway stations.[1] Recent investigations carried out by the Geological Survey of India have revealed the presence of important deposits of bauxite in Shevarny Hills in South India. The ore is of good quality and contains a high percentage of aluminium. The expansion of the industry will result in an increased demand of metals of all kinds, especially of aluminium, and India might well become the main producer of aluminium in the East.

[1] *Science and Culture*, October 1942; Records of the Geological Survey of India. March 1942.

(e) Ilmenite

India is the largest producer of ilmenite in the world. It is obtained from the beach sands of Travancore—possibly the richest mineral deposits in the world—,and along the east coast of India. This is a titanium bearing iron ore which may have upto 32 per cent titanium, an important alloy for high speed steel. The production of ilmenite in Travancore was 308,180 tons in 1949 but fell to 212,000 tons. The entire output was exported in 1950 valued at 19 lakhs of Rupees; the U. S. A. being the chief customer buying about 84 per cent of the exports. In September 1951, Travancore Titanium Products Limited commenced production of titanium oxide with a capacity of 1,800 tons of oxide a year.[1]

(f) Monazite

It is an important source of thorium and contains a small amount of uranium. To conserve supplies for the development of atomic energy exports of monazite are prohibited by law. The beach sands of Travancore are a large potential source of thorium. Under an agreement with a French firm for technical assistance, a plant is being erected at Alwaye, which will be operated by a company financed by Government for the production of rare earth chlorides and carbonates. The residual products will be treated in another factory to be set up by the Atomic Energy Commission for the production of uranium and thorium compounds.[2]

(g) Rutile

Rutile, an oxide of titanium is the latest addition to the accessory minerals. Its commercial production began in 1939 with a modest 150 tons. Since then the annual production has exceeded 2,000 tons. The entire production of Travancore rutile was consumed as a strategic mineral for war purposes. Statistics of world production of rutile were blacked out during the war years. But it may be claimed without contradiction that Travancore rutile was one of the chief sources of a reliably uniform grade, and was probably the largest single source of supply of this mineral. Brazil and Australia are other competitive sources.[3]

1 Records of Geological Survey of India, Vol. 81, Part 3, p. 451.

2 "The relatively large thorium content in monazite (8 to 9% TiO_2) and its small but usable uranium component (0.3 to 0.4% U_3O_8) give the monazite reserves of the Travancore Coast, estimated at over 2.5 million tons, a strategic and economic value which must be utilised with great circumspection on a planned scheme of a long range development for the good of the country and world at large." (Dr. D. N. Wadia, Presidential Address at the 13th Annual General Meeting of the National Institute of Science, Delhi, on 1-1-1947).

3 Visvanathan in *Science and Culture* Vol. XII. p. 28.

Chemicals: (a) Sulphur

Sulphur is a key chemical required in large quantities by every country. India imports about 42,500 tons from abroad every year. The presence of sulphur inside the country in almost all the States has been recorded by the Geological Survey, though in small quantities. In the absence, however, of large quantities of elementary sulphur deposits, there are considerable amounts of iron pyrites which may serve as the source of sulphur and sulphur compounds. An extensive deposit of iron pyrites has been reported to have been discovered near Simla. Analysis revealed an average 40 to 45 per cent of sulphur in the ore. It has been estimated that these deposits will suffice for 20 years consumption of sulphur in India at 30,000 tons per year. In addition, sulphur can be recovered from copper pyrites and gypsum. The amount of gypsum available in India is very large, about 200,000 tons annually raised even at present. Sodium sulphate is another salt from which sulphur may be made available. Sodium sulphate occurs in the alkaline salts that collect on the "usar" lands of Uttar Pradesh and in "khari" salts from Bihar. It has been estimated that about 800,000 maunds of sodium sulphate can be obtained annually even at present with some organised efforts.

(b) Phosphates

Extensive deposits of natural phosphates have been found in Trichinopoly district and in Bihar. The Trichinopoly deposits may yield about 7 million tons. The soils of India have been found to be relatively deficient in phosphates. Bones and bone meal which are exported from India in quantities are another important source on which we may count for the supply of phosphatic fertilisers. The total value of exports of bone meal has increased from about Rs. 21 lakhs in 1949-50 to 50 lakhs in 1950-51 and Rs. 298 lakhs in 1951-52. The annual requirements of super phosphates in 1951 were estimated at 80,000 tons, of which 58,100 tons were produced at home. The total installed capacity is about 175,000 tons per annum, but production is handicapped by shortage of sulphur and sulphuric acid. The Planning Commission has put the target of 196,000 tons annually by 1956.

(c) Alkalies

The following table indicates the trend of our imports of alkalies:

		1937-38	1938-39	1951-52
Caustic Soda				
Quantity in cwts.	.. ..	518,500	497,000	1,237,000
Value in rupees	.. ..	4,281,000	4,507,000	37,210,000
Sodium Carbonate				
Quantity in cwts.	.. ..	1,488,000	1,319,000	1,706,300
Value in rupees	.. ..	5,958,000	6,144,000	28,470,000
Sodium Bicarbonate				
Quantity in cwts.	.. ..	124,000	94,000	193,500
Value in rupees	.. ..	560,000	484,000	3,500,000

In 1951 the production of caustic soda increased to 15,000 tons and sodium carbonate to 47,400. The Planning Commission aims at an increase in installed capacity of caustic soda to 33,000 tons and sodium bicarbonate to 86,000 tons by 1956.

In this country the most important natural source of sodium carbonate is "reh" or "kalar", white alkaline efflorescence found on "Usar" lands in the Punjab and the U. P. The "Usar" salts of the U. P. are particularly rich in sodium carbonate, while the quantities of sodium sulphate are larger in the Punjab. It has been calculated that about 1,800 square miles in the U. P. are covered with visible efflorescence, and that 7 million tons of crude soda could be obtained annually from the State. Large deposits of an earth which contains on an average 8 to 11 per cent of sodium carbonate have been found by Dr. Bhatnagar, Director of the Scientific Research Board, in one place alone near the Lakhsar Railway Station.

Miscellaneous

The occurrence of nickel—an important strategic metal—in India has not been suspected, but recently its discovery has been reported in the snowbound Himalayan regions near Nepal.

The President of the Geology Section of the Indian Science Congress, 1939, pointed out that there are distinct possibilities of the revival of certain forgotten mineral industries like zinc, sulphur and diamond. There is good scope for restarting trade in a few other gem stones like aqua-marine stones, topaz, rock crystal, garnet and ruby. Many valuable minerals are sometimes irrevocably lost on account of ignorance. Thus beryl was exported by a mineral contractor in Jaipur State at £12 per ton. Its export is now prohibited in view of its strategic importance in the production of atomic energy.

Concluding Remarks

When we have regard to all these resources which we have rapidly surveyed we would not be exaggerating if we maintain

that the economic production of India to-day is far below its potentialities. No country is completely self-sufficient in mineral raw materials; but so far as our mineral resources are concerned —and these are not renewable like forests—on the whole, our position is satisfactory both for war and peace time requirements. India's resources in minerals of strategic importance, base metals, alloys, fluxes, refractories and accessory minerals can be regarded as adequate, in several, but not all of them; India is deficient in tin, lead, zinc, nickel, graphite and liquid fuels. But in the basic tungsten metals, iron, manganese, aluminium and chromium, we are well supplied with a large excess in the case of the first three. Ancillary minerals such as asbestos, cement, fertilisers, clays, mica, sulphur, various salts, ores and other minerals of industrial utility are in sufficient quantities for our needs, and in some we have an exportable surplus.[1] It may also be pointed out that according to Cyril Fox over a million square miles of the country still remain to be scrutinised by experts, and a comprehensive geological survey may bring to our knowledge hitherto unknown resources.

Thus, it is not nature that has been niggardly in its gifts so far as this country is concerned. It is the human factor that has failed to take advantage of the many possibilities of economic development that have been placed at its disposal. If man has failed for whatever reasons in the past to take advantage of these gifts, he can in the future rise over the stepping stone of these very failures into a larger life, having acquired the art of utilising all these resources in the light of advancing knowledge.[2] We must remember, however, that the minerals are the gifts of nature and belong to the community as a whole. Hence, their exploitation and utilisation must be in the interests of the whole nation, and not in the interests of a few who can increase their bank-balances by monopolies to mine them. The recent trend in the direction of thinking in provincial terms about problems connected with our mineral resources has to be guarded against, as such a policy might be definitely harmful to the larger interests of the country as a whole.

When we take a general view of all the resources that nature has placed at the disposal of our country, we cannot help envisaging the possibilities of the place of India in the economic

1 "Conservation of India's Mineral Wealth," Indian Science Congress Report, 1939.

2 We cannot totally shut our eyes to the fact that "the more Godlike our powers have become, the more demonic our applications of this power have often turned out."

world of the future.[1] At least four of our minerals—mica, manganese ore, ilmenite and monazite—are of great importance to the industries of the world, but unfortunately the greater part of the production of these minerals, till of late, was exported in raw condition. It is possible to prepare micanite from mica splittings, extract thorium oxide and cerium from monazite, smelt manganese ore to ferro-manganese and manufacture titanium white from ilmenite. Moreover, there are possibilities for the development of 43 separate raw materials which would find increasing application with expansion of industries. There is scope for the increasing use of resources like barite, bauxite, chromite, clays, coal, feldspar, fuller's earth, glass sands, gypsum, kyanite, limestone, lithium, magnesite, manganese, mica, mineral pigments, monazite, nitrates, phosphates, potash, salt, storntium, sulphur, talc, titanium, tungsten and vanadium.[2] As Professor Behre observes, "India possesses large reserves of most of the important industrial minerals—coal, iron, several of the ferro-alloys which make good steel, and the subsidiary minerals—in ample quantity to make her a powerful and reasonably self-sufficient industrial nation."[3]

If the development of the potentialities of all the areas of the world is a condition precedent to the establishment of world peace and friendly relations between the nations on a footing of equality of status, the one imperative duty that calls for thought and action on the part of all Indians is the duty of so planning the life of our people, as to make them no longer merely the sources of raw material and markets for the manufactured products of Europe, America and Japan. Theirs should be rather the duty of so planning their economic existence that all the inventions of the industrial revolution could be applied to their manifold resources for improving the standard of living of the people, and for making the country self-sufficient within reasonable limits.[4]

If we look at the nature of the economic development that has taken place so far in the life of the country, it might well be said that there has been a complete lack of policy in regard

[1] The Partition of India has not affected to any considerable extent the situation as regards our mineral resources. About 97 per cent of the mineral production of undivided India, judged by their value, in 1946 came from the Indian Union. (Vide Records of the Geological Survey of India, Vol. 81, part 3, p. 389, 1950).

[2] *Vide*, Dr. Dunn's Paper on "The Future Development of India's Mineral Resources," Indian Science Congress at Calcutta, January 1943.

[3] Op. cit.

[4] "Within reasonable limits," for we are not unaware that nothing short of a planetary interchange of goods and services, with a view to their being universally shared, can define the final goal of human development.

to such development.[1] The policy of discriminating protection, adumbrated by the Fiscal Commission 30 years ago, was never consistently adhered to in practice. There was neither full and effective protection nor discrimination in favour of Indian industries. With the fear of offending British manufacturing interests, attention was confined to the protection of industries which could command an internal market, for which raw materials were available, and which did not directly compete with British industries except cotton textiles. The possibilities of new industries catering for a potential future market were never thought about. The future planning of the economic life of the country must be directed to the establishment of industries which will not only cater to the demand for consumers' goods, but also for capital goods, and provide a broader basis for our national economy. This implies a rational and planned mineral policy which would aim at the proper development of our mineral resources in a systematic manner, avoiding all wastage and properly conserving our resources, in the national interests. This, in its turn, would become the basis for a planned policy of fostering the key industries like iron and steel, the power industry and the heavy industries connected with chemicals and machinery, etc., with a view to a many-sided development of the life of our people.[2] It is, however, a matter of regret that when we are planning for the development of our national resources, the Five Year Plan should have brushed aside the problem of nationalising our mineral wealth with a view to its conservation.

CHAPTER IV

SOCIAL ENVIRONMENT AND ECONOMIC LIFE

The doctrine familiarly known as the Economic Interpretation of history tells us that all the social and cultural phases of human evolution are ultimately determined by economic causes which in turn are dependent upon the physical and geographical environment. Marxian determinism as applied to all social phenomena is referred to as materialism, because in Marxism more stress is laid upon the economic factor as the determinant of social phenomena. In fact, even human ideals and ideas are

1 "It is indeed paradoxical that India's mineral industry, which forms the real foundation for the country's industrial expansion, should have received no assistance" of the type given to agriculture, forests and jute. Dr. Dunn, "Indian Mining." 1943, p. 244.

2 Our country is now being launched on the planning of its economic life under the First Five Year Plan. With regard to our mineral resources it is grati-

regarded as a reflection of the material and economic environment, though it is admitted that they too, in their turn, affect the economic and material environment. Now there can be no doubt that human evolution in its early stages is dominated by factors like the nature of the soil, the climate and food supply and the resulting modes of occupation. Occupation in turn determines the size and organisation of the group, and conditions to a certain extent the feelings, customs and ideas of the people. Even the religious ideas of a people may be partly influenced by the physical environment. But with the advance of civilised life and the growth of the sciences, our insight into the laws of operation of the physical world gives us increasing control over the environment for the fulfilment of human purposes. Thus with our increasing insight into the social environment which includes the entire system of institutions that surround us—laws and customs, property and markets, marriage and forms of government—we may achieve control over our environment, so that we can modify and adjust it to the fulfilment of a better and a happier life.

It must also be remembered that the activities of individuals as well as of nations are all closely related, and that social, political and economic institutions constantly act and interact one upon the other. If, on the one hand, social and religious ideas and institutions directly affect economic life, on the other hand, economic institutions modify social life and customs and even religions practices. If in the past hundred years political democracy has failed to fulfil the hopes which mankind entertained about it, it may be due partly to the fact that the political institutions associated with democracy worked in an economic and social environment that was not in harmony with democratic ideals. For the same reason a mere imitation of economic democracy, such as the U.S.S.R. has endeavoured to establish, may fail to make the fulness of life possible for humanity, if these institutions are not supplemented by a remodelled social and educational programme with a spiritual background.

The social life of India has been marked by three institutions, namely, the self-sufficient village, the caste system and the joint

fying to note the establishment of a Bureau of Mines under the Indian Mines Act passed in September 1949, which will appraise our mineral deposits in a scientific manner with a view to their conservation and proper utilisation.

During the Second World-War the U. S. depended on India for four critical minerals—Beryl (90.6%), Manganese (85.5%), Mica strategic (88%) and Titanium (26%). This dependence is calculated to reach 90%, 80%, 95% and 80% respectively in 1975. "(Vide Table I Dependence on Foreign Minerals in World-War II and in 1975, in Our Future Dependence on Foreign Minerals" by Allen M. Bateman, in *Annals*, May, 1952).

family. The villagers were divided into castes and within the caste there were joint families. For centuries the people lived in this rigid economic and social system with the village as the unit. As Marx observes, "The structure of economic elements of the society remains unaffected by the storms in the political weather."[1] The rulers might have fought, and one conqueror might have replaced another, without affecting to any considerable extent the life of the villagers. Within the village there was an elaborate division of occupations as between the cultivating classes and the artisans and craftsmen. Among the craftsmen themselves there was an equally elaborate sub-division of occupation based upon caste. Each kind of work was hereditary, and it often happened that each artisan inherited the right to work for certain families. Life in early days was simple; and the village, apart from the cultivator, had a carpenter, a potter, a washerman, a barber and a leather worker. Spinning and weaving in the villages were subsidiary occupations. Apart from the craftsmen there was a class of menials who did the work of scavenging, the outcastes, most of whom were the descendants of the aboriginal population of the country, who were absorbed into the Hindu society of these early days, instead of being exterminated. All the artisan families along with the Brahmins and the outcastes received their incomes, not in cash, but in kind, and not by the day but over periods of half a year or a year.

To complete the self-sufficiency of the village it usually happened that even the raw materials were close at hand. Wood growing within the village area could be used for buildings and implements. Cotton was available in many parts of the country. Most of the goods produced were consumed in the village; and the surplus could be disposed of in the village fairs, held once a week by rotation in a group of villages. The hand workers derived their skill through the heritage of centuries. Their respective occupations had a religious sanction behind them. They were the gifts of the gods, given to them for their living and to forsake such occupations would be a sacrilege.

Caste System

The caste system in turn was regarded as divinely ordained and was connected with the law of Karma, according to which a man's status in this life was determined by his actions in past lives. It is the most outstanding feature of Indian social life.

[1] Capital, Vol. I, p. 379 (Everyman's Library).
For a classical description of the village communities, see ibid, pp. 377 *et seq.*

Hindu society is divided today into more than a thousand castes and sub-castes. It is the caste, and not the individual, who counts in Hindu social organisation. Each caste is set apart by being engaged in a particular occupation, and is marked by customs which sometimes determine the minutest details of daily life. There are rigid rules which prescribe the limits within which social intercourse and marriage are permissible. Individual development was conditioned by the obligations imposed by the requirements of social solidarity. If an individual disobeys caste regulations he may be ostracised. He can only be readmitted after proper expiation. Otherwise, he and his family fall into the group of outcastes. The chief characteristic of a caste is endogamy. A man must marry a woman of the same caste as himself. This had one important economic result. It reinforced heredity of function, for function was made hereditary on both sides of the family.

Of the features of a caste society there are three which belong to caste as a whole as well as to all sub-castes. They are rules with regard to feeding, social intercourse and marriage. Every sub-caste usually possesses its own panchayat or caste council. Inter-dining and inter-drinking are restricted to the group which is endogamous. Though the caste and sub-caste were endogamous, village society throughout India "was characterised by the possession of a number of permanent officials and menials belonging to different castes, each having a definite status in the economic and civic life of the village."[1] So also, in the towns the Council of Elders chosen from all castes and representing all the vocations in the locality looked after the affairs of the town, embodying in this way the principles of co-operation and social solidarity.

"The evolution of caste in India is the normal extension of ancient Aryan institutions, as determined by the conditions and the environment under which these institutions grew in India. The Hindus shared with the Greeks and Romans and with the Persians and Medes the same family organisation, the same clan and tribal organisations; with their advent into India they found themselves in the position of conquerors confronted by a conquered population differing in colour and race. The sacerdotal caste among the conquerors strengthens its powers and extends its privileges, and thus commences its crystallisation of caste system in India—a system which is neither a purely economic organisation of occupations, nor a chaos of tribes and conflicting

[1] G. S. Ghurye, "Caste and Race in India," p. 23.

races, nor a simple hierarchy of classes, but a mixture of all three unified by the common inspiration which dominates all the groups in their functioning. Three broad determining conditions seem to have favoured the growth of this system: (1) Differences due to race and conquests and the unlikeness between different strata of the population due to the differentiation of social functions. In the America of our own times the universal feeling among the Whites that the Negroes must be held apart and subordinate as a race is a typical illustration of a caste institution. Many of the Negroes may be superior to the majority of the Whites; but to dine with a Negro, to work or play by his side, or to associate with him in any relation in which the superiority of the White man cannot be asserted is held to be degrading. The extent to which differences in social functions may develop and foster a caste organisation is also witnessed in the development of the feudal system with its two well-defined castes, the Knightly and Servile, between whom marriage was impossible and intercourse of any kind scanty. In the case of India account must also be taken of the reaction of the theory on the system. When the idea that caste is natural had became prevalent and sanctified, it tended to create caste where it would not otherwise have existed. (2) A settled state of society is favourable, and change hostile, to the growth of caste, because it is necessary that functions should be continuous through several generations before the principle of inheritance can become fixed. This settled state of society prevailed in India for nearly a thousand years. (3) The low state of communication and enlightenment—the ignorance of the masses and the difficulties in the way of free intercourse between the different sections of society—confirmed the caste organisation. Caste is an organisation of the social mind on a biological principle; and this means that functions should follow the line of descent instead of adjusting themselves to individual capacity; it means the subordination of reason to convenience, of freedom to order."[1]

Nevertheless, in all Hindu social institutions we find that the aim is the welfare of the whole to which the individual is subordinated. It is a functional organisation. The caste system at least in its origins was no exception to this. It had perhaps the eugenic value of preventing reckless inter-mixture. The caste system regulated the inequalities of economic society by the principle of hereditary functions. By prescribing for everyone his Dharma it regularized trade and profession, and endeavoured

1 Wadia and Joshi, "The Wealth of India," 1925, pp. 123—25.

to free men from the obsession of greed and absorption in materialistic cares. The castes also served as trade unions. They protected the interests of their members by prohibiting outsiders into their trade and occupations, and also provided for united action against exploitation. The caste organisation was instrumental in preserving the continuity of Hindu Culture and Civilisation.

However, it was not a system which could accommodate within it the new forces set in operation by the impact of the West. From an economic point of view, it made the movement of labour and capital difficult, if not impossible, killed the spirit of enterprise and initiative by making functions hereditary and preventing social mobility. There was no scope for ability to show itself, as movement up the social ladder was impossible. The treatment of the untouchables which involved the degradation of human beings to a condition sometimes worse than slavery meant a tremendous wastage of human talents and potentialities. Economic development was hindered, if not made impossible, in such a social order which was designed for stability rather than progress.

Joint Family System

The joint family had also a religious significance, securing the salvation of the souls of the dead members of the family by the offering of proper sacrifices. The property of the joint family was intended for the spiritual benefit of the departed, as well as the temporal benefit of the living members of the family. The right of inheritance was determined largely by the spiritual benefit which would accrue to the dead members of the family. The institution of marriage had also a religious significance. Above all things it was necessary for the head of the family to have a son, for on such a son depended his salvation hereafter. Marriage was practically universal. For parents to have unmarried daughters was not only a disgrace but a dereliction of religious duty. Early marriages were customary. They were arranged by the parents while the children were young. Early marriages were also a necessity for the preservation of family harmony. It was not to be expected that a mother of forty would relinquish the management of a family to any young woman who might catch the fancy of a youth. If a girl was to spend her life as a co-operating and contented member of a family, it was necessary that she should come to it early to be schooled in its traditions.

The joint family in India is a large group of relatives descending from a common ancestor. Marriage is usually forbidden amongst its members. The income and expenditure of such a family are joint. The individual in the joint family scarcely exists except as a member of a group. The relations of the members are governed not by secular law but by Hindu law and customary regulations. The joint family, moreover, is closely linked, as we have already said, with early marriages. So long as it endures there is no question of a young husband being unable to support his wife. It is not necessary for him to leave the house of his father and set up a separate house. The resources of the joint family give him and his wife economic security. No young man need wait till he is in a position to earn an independent living.

Family life of any type involves sacrifice and is founded on a policy of mutual give and take. But in the joint family where the wishes of all, young and old, males and females, have to be consulted and reconciled the sacrifice is infinitely greater. It is an association that guarantees the minimum of subsistence to every member, which supports the old and the infirm, provides for widows and orphans, and looks after the physical weaklings and the decrepit. It dispenses with institutions like the Poor Laws and the Work House.

From an economic point of view the joint family system meant co-operative production and co-operative consumption. This involved avoidance of economic wastage and conservation of economic resources. The joint family facilitated proper division of labour, where each contributed his quota of work according to his ability, and all shared in the fruits of the labour of one another. In brief, the joint family was a socialistic organisation in miniature.

Changes in Social Life: (a) Village

The village organisation as a self-sufficient unit was the first to disappear under the operation of new economic factors that were brought into play with the establishment of British Rule. The introduction and extension of roads and railways brought the villages into closer communication with the towns and widened the market. The old system of paying in kind was replaced by one of payment in cash. Customary fixing of wages and payments disappeared in favour of a competitive method. The economic equilibrium of the village community and the self-supporting character of the village were upset. The rela-

tions between the villagers and the servants and craftsmen were also changed. The latter began to work for individual employers and no longer for the village as a whole. As the villagers ceased to be isolated there was an increased mobility of labour. Labourers were attracted to the towns and cities, to commercial and industrial enterprises by the higher rates of pay which they could obtain. Even the artisans were no longer tied to the village of their birth or their ancestral occupation, but migrated to places where they obtained better prices for their wares or labour.

The social structure of the village was further affected by the activities of the State. As the Government began to undertake functions which were previously performed by the autonomous village, as special departments were created for education, excise and forests, the villagers who were once accustomed to govern themselves were gradually habituated to being governed from without and by others. The status of village functionaries was changed. They ceased to be answerable to the village communities, of which they had once been the representatives or servants. The system of land revenue administration also stressed the responsibility of the individual holder of land. Individual holdings were assessed separately, whereas formerly the village was assessed as a whole. The recognition under British Rule of the rights of private property in land was instrumental in transforming land into a marketable commodity which could be bought and sold. Transfers of land not only brought outsiders into the villages, but created a class of capitalist landlords who displaced the peasant proprietors. The age-old spirit of corporate life, fostered through economic and social give and take within the village, the idea of fraternity, was gone. This decay has given us the 'modern' village with its poverty and uncleanliness, bickerings and feuds, ignorance and superstition and, in a word, all the features of a callous demoralised collective existence.

Amongst the methods of communication that have influenced the life of the village must be mentioned the bus. "The bus is outstripping the train as a carrier of ferment into the peasant life of India. As the millions of Indian rats carry plague, so the thousands and thousands of buses always crammed with passengers and carrying them from the villages to the city and back, carry the virus of modernism."[1] By bringing the villages into

1 Basil Mathews, "India Reveals Herself," quoted by O'Malley in "Modern India and the West," 1941, p. 248.

contact with the towns and with the social and political developments of the rest of the country, the bus has awakened the rural population into a new sense of life. Villagers use the bus to go to the cities where the circle of their interests and knowledge is widened, and they carry back new ideas to their homes. The cinema in a town acts as a powerful ferment in the villager's life and creates new interests and opens out a new world to him.

Whatever changes the bus may have brought into village life, it must not be forgotten that even to-day there are thousands of villages in India unconnected by a railway or a metalled road with the towns, and where the only modes of transport are human feet or the equally slow moving bullock cart. These villages are but very little affected by the changes in the socio-political life brought by British Rule into India. "Even now, despite the remarkable improvements in communications which have taken place, only a small proportion of the villages have railways or metalled roads within several miles of them, and the rest must be approached by rough cart tracks or winding pathways between the fields, of which the former alone can afford passage to bullock wagons and such other wheeled traffic as there may be during the season when floods do not interrupt them. Thus many millions of Indian villagers are, according to Western standards, extremely isolated. Those that happen to be situated within a few miles of towns or railways or good roads are in a position to widen their outlook, and acquaint themselves with larger happenings than those which village society provides, can also market their surplus produce for consumption in urban India or abroad, but the others are still self-sufficing both economically and culturally. Throughout the greater part of the country the typical self-contained Indian village community, unmodified for centuries, still exists—an interesting and surprisingly intricate social organism, in many ways resembling the characteristic rural unit of which we read in histories of Medieval Europe, and containing its landholders and tenants and agricultural labourers, its priest and its religious mendicant, its money-lender, and a whole order of artisans—the carpenter, the blacksmith, and the weaver, the potter and the oil-presser—each with his clearly prescribed functions, hallowed by centuries of tradition."[1] The picture is not very different now, over two decades after this was written.

What changes broadcasting will bring into the social life of the village it is difficult to foresee. It may be used as an instrument for uplifting the life of the rural population and for the

1 India in 1930-31, p. 155.

promotion of social health. Short and simple talks may be given in the languages of the different parts of the country on subjects like hygiene and sanitation, child welfare, crops and manuring, and the co-operative movement. Such subjects may create a new interest in the lives of the villagers. Information with regard to market prices of different kinds of crops may help the farmers in protecting themselves against the artifices of middlemen. Programmes of music and songs and dialogues on current topics may lessen the dull monotony of village life. In a country like India where the large majority of the adult population are unable to read and write, broadcasting has unlimited potentialities for dissipating the prevailing ignorance, and bringing light and life into the homes of the villagers.

(b) The Caste Organisation

The caste resembled the village in being a self-governing community. It had religious sanctions based on the belief that it was a divinely ordained institution. Whilst on the one hand it involves separatism, preventing the fusion of different classes in a homogeneous community, on the other hand, it is a bond of union among the members of each individual caste, setting up its own standards of life and conduct.

Long before the establishment of British Rule in India internal movements within the country had challenged the privileges of the Brahmins and the inequalities involved in the caste organisation. Reformers had denounced caste, stressed the equality of all men as worshippers of God, and taught that by faith and virtuous living all castes can be purified and attain salvation. Yet sects like the Lingayats which at one time rejected caste distinctions were brought later on under the domination of the caste system. There is also no doubt that the system acquired greater strength and rigidity in reaction to the pressure of Islam in territories under Muslim rule.

It has also to be remembered that the composition and occupations of castes were susceptible of change. Even the Laws of Manu recognised the possibility of a change of social status. "Much has been said about the caste system interfering with the economic life of the people. But it is a conventional observation in many cases much exaggerated. What is most prominent in the distribution of the workers in the occupations is inevitable economic necessity."[1] Neither sanctity of custom nor caste prescription debarred change of occupation within limits. Even in the 18th century we find Brahmins occupied as merchants,

1 Venkatasubbiah, "The Structural Basis of Indian Economy," 1940, p. 39.

bankers or soldiers. The resort to an occupation different from the hereditary was tolerated even by the functional castes.

Under the new conditions brought into existence by British Rule conveniences and material interests have been instrumental in the setting aside of caste rules. "The attractions of football have triumphed over the prejudice against leather."[1] Imported articles like biscuits and aerated drinks have been accepted without demur. An orthodox Brahmin who would not dream of taking food at the hands of a European takes it readily out of a tin made in a European factory.

The railways brought men and women belonging to all castes, high or low, into contact as fellow passengers, and so did the bus and the tram car. Water was taken from municipal pipes and streets hydrants were used by Hindus and Moslems alike. And the extraordinary elasticity of practical Hinduism, like the elasticity of the Catholic Church in the Middle Ages, rose to the occasion in sanctioning practices which at one time would have compromised the salvation of the recalcitrant. The merits of pilgrimage would not be lost by a railway journey and the water tax was a penance which atoned for the use of municipal pipes. The dissection of human bodies for medical purposes was not prohibited by the Shastras, so the Brahmins declared, when the study of anatomical surgery was introduced in the Medical Colleges.

As the Census Report of 1931 puts it, "The conditions of modern life have broken down the idea that contact with certain castes involves pollution. The use of conveniences such as trains and trams necessitates a relaxation of the rule that certain castes pollute by touch." The decline of the old handicrafts and occupations due to competition from machine made goods has compelled large numbers from the villages, and even in villages, to take to occupations which have no reference to ancestral callings. The impact of new economic forces resulting from the contact with the West has affected the caste system. The caste system was an institution adapted to a static society. It did not give any stimulus to inventive genius and was doomed at the touch of the Industrial Revolution. For the machine does not respect persons whether Brahmins or Shudras. In factories, people of different castes work together. Urban life slowly but surely destroys rigid caste restrictions. The trams, trains and theatres cater for all those who have money to pay irrespective of their castes, and so in the cities and towns the high born

1 O'Malley, op. cit. p. 366.

Brahmin is found rubbing shoulders with the low born Shudra. In the markets, in the factories, in the tea shops, men belonging to all sorts of castes mingle together dissimilar in ethnic origin and domicile. Intercourse with Europeans and political or economic conferences are bringing together men and women of different castes. Economic necessity or ambition is leading even the higher castes to careers which 60 years ago would have been regarded with horror. The educational institutions through their hostels foster a closer association between boys and girls of different castes. The new social and cultural influences which have been brought to bear upon the life of the people during the past hundred years have violently shaken in the educated classes the foundations of the old rigid social order.

Sometimes the system of caste has been defended on the ground that it provides every one born in the caste with some work, that it institutes a sort of democracy within the caste, and secures the continuity of skill amongst the craftsmen by its hereditary character. On the other hand, it may be pointed out that the existence of the caste organisation has not prevented unemployment on a huge scale in the country, and that whatever skill and intelligence is inherited by the craftsmen, it has not enabled them to improve their standard of living.

Caste has brought about the undue suppression of large masses of men who belong to an inferior caste. Their spirits and minds have not found the opportunities for growth. The community which is caste-ridden is deprived of the intellectual and spiritual wealth which would otherwise have contributed to the uplift of humanity. It has been largely responsible for the perpetuation of foreign rule by emphasizing and promoting separatist and fissiparous tendencies. Till recently it was common experience to hear the non-Brahmins and depressed classes declaring that they would prefer foreign domination to that of the high caste Hindus.

As for the influence of legislation on caste the only enactment that has a bearing on the caste system is the Caste Disabilities Removal Act 1850, which laid down that any law or usage which involved forfeiture of rights of property, or affected any right of inheritance by reason of any one being deprived of caste, cannot be enforced in the courts of British India. The Act was intended to protect converts to Christianity or Islam. Even before the advent of independence popular ministries in the provinces had enacted legislation removing different disabilities of the lower castes.

The judicial system in India may be included amongst the factors which have brought the weakening of caste rigidity. The law administered by the State refuses to recognise the self-constituted courts of the castes, the punishments which they inflict are regarded as extra-legal. The authority of the castes has frequently been set aside by ruling of the Courts. Any one aggrieved by a decision of the caste tribunal can fight his case in a court of law.

Though of late there has been a tendency in certain urban areas towards strengthening the caste organisation by a parochial patriotism by means of separate provision of houses and chawls, dispensaries, scholarships and hostels for one's caste people,[1] the impact of the new economic forces—especially the development of finance capitalism—is steadily though slowly leading to the substitution of caste by class. The machine has lifted a new class of people to wealth and power, and a bourgeoisie based upon economic power is replacing the old aristocracy based on birth.

There is an upward surge on the part of the lower castes. Social reforms, economic betterment and educational advance are the channels, through which attempts are made to raise the status of the lower castes. The movement for the uplift of the untouchables was initiated in the earlier days by the activities of philanthropic agencies like missionary societies and the Arya Samaj. The denial of their right to be classed as Hindus was modified by political considerations after the Reforms of 1919. It was also felt that if India was to be recognised as coming within the comity of civilised nations, Indians themselves should recognise their responsibilities for the uplift of the depressed classes. It was Gandhiji who galvanised the movement for the uplift of the Harijans by showing his readiness to fast to death first in 1932 and again in 1933. As the result of these fasts, and the massive constructive and educational work done under Gandhiji's inspiration, the untouchables were admitted to temples in a number of places in British India and Travancore, and other states issued proclamations, throwing temples open to all castes. Gandhiji regarded untouchability as a heinous crime against humanity. It had suppressed vast numbers of the Hindu community, who were not only as good as the rest, but who contributed to the social welfare by rendering essential services. He rejected authority, if it conflicted with sober reason or the dictates of the heart. He would not deny God by denying to a fifth of the Hindu race the right of association on an equal

[1] See Ghurye, op. cit. pp. 167-81.

footing. If the inertia and apathy characteristic of a static social organisation are today disappearing and the millions of Indians are awakened to a sense of the dignity and worth of human life this transformation may largely be attributed to Gandhiji who at one time offered his life for the liberation of those depressed millions from the yoke of a dead past which has hitherto weighed them down. Under the inspiration of Gandhiji untouchability has been abolished by the Republican Constitution and all discriminatory and differential treatment on ground of caste, creed or sex is *ultra vires* of the Constitution. In order to raise the status of the so-called scheduled castes, special efforts are being made by Government, and recently a Backward Class Commission has been appointed, with Mr. Kalelkar as Chairman. The Planning Commission Report[1] has also paid special attention to the question of amelioration of backward classes and a total provision of Rs. 41 crores has been made for the programmes in this connection.

(c) The Joint Family

A hundred years ago families continuing undivided and having all things common for a number of generations were the rule and individual property the exception. As time passed partition of joint families became frequent, and it was sometimes stated that a family which had lasted for more than two generations was rare. It is now becoming increasingly common for families to be broken up on the death of the father. The property is divided, the sons take the share to which they are entitled and set up separate establishments. Among the lower castes separation takes place even during the father's lifetime. This is said to be due to limited house accommodation. Very frequently the families to be broken up on the death of the father. The property classes partition during the life time of the father is not so prevalent. The sons do not expect to have a private purse unless they have received a modern education and are imbued with Western ideas of individual rights. It has been also observed that the largest joint families are to be found in the most fertile parts of India, where rural density is the highest, and where the best results in agriculture can be achieved by pooling all available labour and resources.

Economic considerations are also said to induce the families of artisans to stick together. The joint family has preserved its vigour among the artisans more than among the agricultural castes. It has often happened that the members of a joint family,

1 See Chap. XXXVII of the First Five Year Plan for details.

as a matter of convenience, continue to live in the ancestral home even if they are split up. The different families are as separate as the tenants of flats.

The disintegration of the joint family which is to-day confined to the cities and towns may be traced to a number of causes. The joint family is an institution which had its origin in times when the country was thinly populated, and cultivation was capable of expansion in response to the needs of the growing family. The larger the numbers in a family, the greater the number of people available for work. The joint family was adapted to a static society in which the members of a family lived in the same place and followed the same occupation from generation to generation. During the last hundred years an increasing population has caused increasing pressure upon the soil. Owing to the small size of holdings sons of cultivators are forced into the adoption of different callings. Roads and railways facilitate migration. The able-bodied and the enterprising leave their homes to find work elsewhere and often settle down with their wives and children in the place of their employment.

Another factor which has contributed to the disintegration of the joint family is psychological. The growth of a spirit of individualism is hostile to an institution of which the corner-stone is co-operation and collectivism. Ever since the power of making a testament was recognised under British Rule the process of disintegration of the joint family has been accentuated. We may also include among the disruptive influences friction between members of the same family, quarrels among women, troubles caused by idlers, and mismanagement of property by the head of the family. Owing to the intrusion of Western ideas and ways of life discordant with old Indian customs, the joint family has often become a house divided against itself. The older people in the family cling to old rituals and customs. The younger people discard them.

The joint family has been looked upon as an institution which discourages individual initiative and penalises the able and the industrious for the benefit of the idle. Inequality of earning capacity among the different members of the family due to the variety of careers which are open under present-day conditions has been a source of disagreement. The right to have a separate income is frequently claimed and the old readiness to share individual earnings is gradually disappearing. Legislative enactments like the Gains of Learning Act of 1930 have weakened

the collectivist basis of the joint family by providing that an individual member has a separate property. Such gains of learning were formerly treated as joint property. The Law also allows a daughter's son or sister's son to succeed to family funds. This is a concession which undermines the very foundations of the joint family which recognises succession only in the male line.

Not long ago the Government of India introduced a Hindu Code Bill providing for divorce and the recognition of the rights of daughters along with sons to the inheritance of property. The Bill, if enacted into law would have accelerated the disintegration of the joint family. So vocal was the opposition on the part of the orthodox elements in the community, that it was thought wise to drop the Bill, and a new Hindu Marriage and Divorce Act has been introduced in the Council of States in December, 1952. Amongst other things it raises the marriage age of girls from 14 to 15, makes bigamy an offence under the Penal Code, and lays down the conditions for judicial separation and divorce. It may be noted that legislation against bigamy was enacted in Malabar in 1933, in the old Baroda State in 1942, and in Bombay in 1946.[1]

The old social institutions in India are in the melting pot. The village community as an isolated, autonomous, self-sufficient unit has almost disappeared. The caste organisation is being increasingly challenged by economic pressure on the one side, and on the other, by the force of the new ideas and ideals that contact with Western thought and modes of living has brought with it. The joint family, though it has still a hold over the rural population, is fast disappearing in the towns and cities.

India's Religious and Cultural Heritage

The culture and civilisation of any nation does not consist in purely mechanical improvements and the comforts of living: it has been defined as a form of social organisation in which men and women, thrown into close relations are enabled by their diversity of gifts to enrich and enlarge one another's lives. The rampart of mountains and forests which divides the Indian continent from the rest of the world has in part determined that India should have developed a culture of a distinctive type. The Aryan invaders who settled in India found the country a land of

[1]Customs sanctified by centuries cannot be easily dropped by penal legislation Dr. Ambedkar, the sponsor of the Hindu Code Bill, was reported to have said that nearly 2,000 marriages were performed in contravention of the Act against bigamy in the first four years of the passing of the Act. In the absence of Central legislation in this behalf, one can readily imagine how easy it must have been to cross the borders of Bombay into a neighbouring State to defeat the operation of the Act.

forests which afforded them shelter from the fierce heat of the sun, fuel for the sacrificial fire, and pastures for their cattle. It was in these forests that Indian civilisation had its birth, and it was this environment that gave to the settlers a sense of friendliness with nature in its varying aspects—a sense of harmony between the spirit of man and the spirit of the world which they never lost, when mighty kingdoms were established and wealthy cities displaced the primeval forests. "Even in the hey day of its material prosperity the heart of India ever looked back with adoration upon the early ideal of strenuous self-realisation, and the dignity of the simple life of the forest hermitage."[1]

But it was not merely the forests that influenced Indian culture and attitude to the problems of life. The Aryans who came to India must have spent their time among the Himalayan mountains. Their minds must have imbibed the unearthly majesty and beauty of the snow covered ridges. The individual might well have felt and realised his own littleness and helplessness, confronted by the grandeur and stupendousness of these huge upsurges out of the bowels of mother earth. The Aryans were a poetic and imaginative people who were inspired by their surroundings into those creative legends and allegories which still survive in Hindu Mythology. Indian thought has generally been contemplative; it has never been enamoured of the material side of life. The Hindu never made the mistake of confusing appearance with reality. He had no great confidence in human capacity, realising his own finitude in marked contrast to the infinitely towering mountains and the rushing torrents and the dense forests. Exposed to calamities on an enormous scale in the shape of storms and earthquakes, floods and deluges of rain, and excessive droughts resulting in famines and pestilences, exposed also to the attacks of diseases and of wild animals, he was dominated by his surroundings and had "no desire to challenge these forces, to struggle with them, to acquire a mastery over them by study and analysis and concentration on details."

The Upanishads were largely the fruits of the Aryan ideas of Karma and transmigration. "The innocent joy in life which greets us in the hymns of the Rig Veda was replaced by the belief in later days that every individual after death enters again upon a new existence in which he gathers the fruits of merit earlier acquired and has to endure the consequences of sin previously committed." The Upanishads addressed themselves to a philosophical explanation of Karma, and offered a way of escape

1 Tagore, Sadhana, pp. 4-5.

from the relentless judgment of rebirth. Man has to escape the necessity of rebirths by a knowledge and contemplation of the Supreme Soul, "the one without a second."

But this fundamental unity of creation was not simply a subject of philosophical speculation. It was the mission of India, as reflected in the life of the Rishis, to realise this harmony in feeling and action. "India intuitively felt that the essential fact of this world has a vital meaning for us; we have to be fully alive to it and establish a conscious relation with it, not merely impelled by scientific curiosity or greed of material advantage, but realising it in the spirit of sympathy, with a large feeling of joy and peace."[1]

When the Aryans conquered India they destroyed much of the aboriginal religion and culture. No civilisation, however, can be wholly pure. When we turn from speculation to religious belief, we find the Hindu conquerors absorbing into their pantheon an assortment of Gods many of whom belonged to the indigenous race. Brahma, Shiva and Vishnu, Brahma the principle and source of life, Vishnu the preserver, and Shiva the destroyer became the objects of worship, and many multitudes of gods and goddesses. All these gods and goddesses were ultimately so many different phases or incarnations of one God. But about the average Indian even today there is a curious air of abstraction, a consciousness of the endless, timeless nature of Reality, and of the vanity of all things else. The Hindu subordinated the material to the spiritual. To him, religion was supreme, not politics. He valued the eternal in preference to the temporal. The power of religion is revealed in every sphere of his daily life. Is it then surprising that, "In our century it is a saint rather than a statesman who has for the first time in history unified all India?"[2]

As this thought pattern of the early Aryans was modified by contact with the conquered races, so their social pattern in contact with the conquered population was developed into a caste system which with the lapse of time multiplied into hundreds of castes tied down to rigid rules about inter-dining and inter-marriage. The sanctions of the later religious organisation were brought to bear on the perpetuation of the caste system. Men are born into a particular caste, and are unalterably superior or inferior to their neighbours. The caste into which a man is born has been determined by his behaviour

1 Tagore, Sadhana, p. 7.
2 Will Durant, "The Story of Civilisation," 1935, p. 503.

in a previous birth, and his only hope of a better lot in the next incarnation lies in the humble acceptance of his position and the strict observance of the rules of his caste.

"The joy of existence and realisation of life which marked the profounder teachings of the Rishis were subordinated to a doctrine of redemption which started from an assertion of the evil and pain inherent in human life." Life involves misery from which there is no escape as long as consciousness persists. The great majority of the people found comfort in a teaching which told them that peace could only be obtained through extirpation of desire. "The joy of life and work, of the harvest song that leads humanity through increased production to the kingdom of God, the message of work that had been preached by the Rishis of earlier days, was now replaced by a teaching that emphasised the extinction of desires and the suppression of wants. And though Buddhism is now no longer in India the force that it once was, it has left its indelible impress on the mind of the people, taking away all joy out of work, making life a hindrance to spiritual progress, inspiring in the masses a sense of resignation to evil, instead of that spirit of discontent which looks on every evil as a challenge to man to be overcome by his efforts."[1] It is not easy to imagine a more effective method of persuading the down-trodden and oppressed and poverty-stricken to remain content with their lot than the Hindu conviction of nature's mastery over man, and of the working of inexorable laws which determine the fleeting fortunes and misfortunes of human life beyond the control of man.

The caste system was the most fundamental fact in the history and life of the Indian people. It brought together in a single social organisation peoples and races, speaking languages twice as many as those of Europe, holding the most diversified religious beliefs, and representing every stage of intellectual development. The caste system was the outcome of a spirit of toleration, that experimented in evolving a social unity within which all the different races could be held together, whilst they were left free to maintain their differences. In America and Australia the aboriginal and indigenous races were exterminated till only a few hundred thousand are left to-day to serve as museum specimens for anthropological study. In India the aboriginals were absorbed into the social organisation of the conquerors. What the caste organisation overlooked was that "in human beings differences are not like the physical barriers of

[1] Wadia and Joshi, op cit. pp. 178-9.

mountains, fixed for ever—they are fluid with life's flow . . . In trying to avoid collisions, India set up boundaries of immovable walls, thus giving to her numerous races the negative benefit of peace and order, but not the positive opportunity of expansion and movement."[1] The caste system was the crystallised expression of an outlook on life that saw no value or worth in striving, in effort, in the desire to make oneself better and happier.

To sum up, Indian Civilisation is an "expression of a 'medieval' people to whom religion is profounder than science, if only because religion accepts at the outset the eternity of human ignorance and the vanity of human power. In this piety lie the weakness and the strength of the Hindu: his superstition and his gentleness, his introversion and his insight, his backwardness and his depth, his weakness in war and his achievement in art. Doubtless his climate affected his religion, and co-operated with it to enfeeble him; therefore, he yielded with fatalistic resignation to the Huns, the Moslems and the Europeans."[2]

Clash of Cultures

India after the establishment of British Rule has become the meeting place of the East and the West. The changes—political, social and economic—which occurred in the second half of the last century brought a new India into existence. An immense increase of population, the development of commerce, the introduction of means of rapid communication—the railways, the postal and telegraph systems—the growth of printing and newspapers, broke down the geopraphical barriers which had formerly kept the people of the country apart and contributed to the consciousness of a common national life and destiny. The facilities of communication led to movements of populations and affected the organisation of village life. The spirit of nationalism was fostered by bodies like the Poona Sarvajanik Sabha and the Indian National Congress. Indian youth increasingly imbibed English thought through the channel of English literature in educational institutions. The spread of education led to a revival of pride in the ancient culture of the land. The victory of Japan over Russia was welcomed as the victory of an Eastern over a Western power, and gave a new impetus to the demand for freedom from subjection to British Rule.

But the West that came to India in the early years of the 18th century was different from the West as it appeared to Indians in the later years of the 19th century and the first forty

1 Tagore, Nationalism, pp. 116-7.
2 Durant, op. cit. pp. 611-12.

years of the present century. The West that spoke to India through the works of Shelley, Keats and Wordsworth, through Mazzini and Garibaldi was a West that believed in dreams of brotherhood and freedom. The West as it strikes the educated Indian today is a West that pins its faith on machinery and armaments, a West that is in danger of losing its finer traditions in the worship of wealth and power.

When we talk about India as the meeting place of East and West, let us also remember that ours is a country with a culture that is neither uniform nor evenly distributed. Western culture has today spread only to a section of the people—that section in the towns and cities who can read and write English. The India that lives in the villages has been far less affected by Western influences. The motor bus is breaking down the isolation of the villages; the economic life of the village has been affected by Western methods of administration, by the use of machine made commodities, by a price economy that has linked the village to markets in and outside the country. But otherwise the traditional life of the village rolls on as it did generations ago. A new life, however, is coming to the villages through a hundred different channels of which it is difficult to take account. The villages are increasingly linked together, not only through the railways and the telegraphs and the bus, but also through the cinema and the radio. The commercial traveller anxious for business, the college student returning to his village, the political adventurer anxious for his vote, the great leader collecting the masses in thousands, bring a new life blood full of promise.

But how will this promise eventuate? The contrast between the East and the West is not a contrast between the pursuit of the spiritual and the worship of the material. Europe is not simply occupied with material things. The ideals of human activity—the search for truth and beauty and goodness are not confined to any one continent or any one race. In the West, as in the East, man is pouring forth his life for knowledge and for the service of humanity. We, on the other hand, in the East, bound by fetters of the past, revelling in a ritualism which worships the external form instead of the spirit that is behind the form, we who believe that sin can be washed away by the waters of the Ganges, we are materialistic in our outlook to this extent. Man is essentially a spiritual animal and can never remain solely material. The contrast between the East and the West is rather a contrast between an approach to life in institutions that has subordinated the individual to the group in the larger interests of the group,

denying to the individual in some ways the opportunities for a fuller life, and an approach to life which in the name of the rights of personality and freedom for the individual has brought chaos in the field of economics, and expressed itself in the narrower forms of organised selfishness.

Nowhere does this contrast find more typical expression than in the institution of marriage—the Hindu ideal of marriage has no regard for individual taste or inclination. Hindu society found itself in an environment where the encroachment of alien cultures had been a constant danger to be guarded against; marriage had to be rescued from the control of the heart; selection by "love" had to be strictly regulated for the sake of the progeny. Even in Europe we see glimpses of such considerations in the marriages between royal dynasties. In the West, on the other hand, the greed of man has sought to use woman for the purposes of his individual enjoyment; marriage has lost that social significance which once belonged to it. The process of urbanisation has brought with it the separation of the individual from the group into which he was born, and his removal from its supervision. New ideologies have destroyed the sacramental character of the marriage ceremony and the justification of sex relations only in terms of progeny.

It is this contrast in attitudes to which India has been a witness during the last few decades. We need not rake up the history of the past. But the immediate results of the shrinking of the earth's proportions by scientific knowledge and its applications lie in the increased opportunities offered to the stronger races to exploit the weaker ones by the organised mechanism of power. The weaker ones have in turn cultivated as a measure of self-defence an attitude of national self-assertion which aggravates misunderstanding and promotes conflicts.

We have described the changes in our social institutions. Elsewhere we have dealt with economic life under the British. By her clash and contact with the West, India has perhaps reinvigorated her culture. Spiritually, she fights hard against the religious superstitions which are rapidly being dissolved by the acid touch of modern science. In the political sphere, she has achieved a unity never possessed before. And economically, she is trying to imitate the West by developing her industries. But shall we in India allow the Western type of Industrial Revolution to breed uncontrolled capitalism with its concomitants of millionaires and paupers, of palatial buildings and slums—

which have already begun to appear—which negate the whole of our cultural heritage? Or shall we imbibe the best in the West and properly adapt it without losing the spirit of our ancient culture? May we not in the midst of these conflicts hope for a better order in which what the East will value and teach humanity—or learn by co-operation with the West—that if it is the destiny of man that he should achieve a material salvation, it is also true that this material salvation is possible by man's own powers, and that such a salvation may be worse than a spiritual damnation. Blessed indeed are those that inherit the earth, but the holy alone can be happy.

The hope for a fusion of cultures and institutions rests on the fact that whatever influence Western institutions have exercised in India has been exercised largely on the upper strata of society—the men living in the cities, the Rajahs and Nawabs and bourgeoisie of the towns, men in top hats and the women in short skirts and slacks, the cinema goers and the cabaret frequenters. The heart of India still beats strong in the villages—Rulers may come and go—a new Delhi may replace an old Delhi as the seat of power. The salt tax may take the place of *jezia*. They are the changing phases of the social environment much like the changing phases of the climate and the rains. The hunger and thirst for truth, the sense of the infinite still reconciles the villager to these changing phases. This is the foundation of our hope that in the emergence of a better world order India will make its own distinctive contribution; and yet we cannot shut our eyes to the possibilities of a different turn in the history of the future. The materialistic spirit underlying Western science and resulting in the multiplication of superfluous wants has not confined its influence to the towns, but has even penetrated the villages. It has a grip over the lives of the younger generation whose purposeless activities culminate in living in the present, in marked contrast to our cultural heritage. Instead of the East contributing its heritage to a culture binding East and West together, we, in India, may be dominated by the disintegrating trends that mark Western civilisation. We, too, may become part of a current that leads to the worship of the machine. the dehumanisation of the individual, to the concentration of power in a minority which under the name of fascism or communism or capitalism or nationalism seeks to perpetuate the conditions of its own existence. That this process is at work in our country is evidenced by the latest slogan of linguistic States, sacrificing loyalty to the country at the altar of a narrow and more limited

loyalty to a section out of the whole, which might finally culminate in the sacrifice of group loyalty of any kind to the interests of the abstraction, styled the individual self. The dissolution of long established habits of communication and co-operation, evidenced by a complicated system of passports and visas, the narrowing down in the West of intercourse to people of the same race or nation, find a parallel in our own country in the demand for linguistic States, a demand which far from confining itself to constitutional methods of agitation resorts to fasts and hunger-strikes, mob hooliganism and uncontrolled violence.[1]

If a free India has to plan a new economic order, such an economic order aiming at the social control of its agriculture and industries in the general interest of the people cannot just be grafted upon the old social institutions. The new economic order must be built on the foundation of the revitalised village as a coherent economic unit, not necessarily self-sufficing, but duly linked up with the rest. In the future order that we envisage, caste and religious institutions and linguistic claims will be regarded as irrelevant in the context of civic and economic pursuits; for, after all, the incidence of economic changes is equal for all; economic forces—markets and prices, banking and currency policy, etc.,—make no distinction between a Hindu and a Moslem, a Parsi and a Christian, a Gujarati and a Maharastrian. The communal differences are, in fact, soluble only in terms of the organic unity of the economic life we are striving for. This will require a new type of family, based no longer upon the social inferiority of women, but resting on the equality of relations between the sexes, recognising the equal status of women with men, making possible not only health and happiness within the individual family, but securing the welfare of the younger generation by providing an atmosphere of friendship and affection between parents, and by recognising the 'right of the unborn to be well-born.' Such an economic order can no more tolerate a caste organisation, however deeply rooted it may be in the past. It will have to rest for its security and permanency on a new social order, not a classless society in which there will be no differentiation of functions and division of labour, but a society in

1 There can be nothing so fatal to the organic unity of our country as this demand for breaking up the country into linguistic areas, in the name of administrative efficiency. This demand if conceded will mean the perpetuation of separatist factors, the raising of barriers between State and State, and the substitution in practice of State citizenship in place of Indian citizenship. Administrative efficiency can be more effectively secured by the dissolution of all old world rivalries and class distinctions of the exploiters and exploited in a territorial re-organisation such as Cleisthenes effected in ancient Athens and the French Revolutionaries in France after 1789.

which differentiation of functions will rest, not on wealth or birth or property, but on merit and virtue. It will be a society in which class differences will depend not on rank and status, nor on descent, nor on a dignity that is separatist in its results, but on ability to contribute to social well-being. Every honest occupation will be regarded as worthy of respect. No work will be regarded as clean or unclean in itself. Equality of opportunity will enable the individual irrespective of his caste or creed to find his proper level, and co-operation between the different classes will make it possible for all to grow into the fulness of life. Such an order will aim at an organic whole of institutions in which the spirit of service and sacrifice which marked the earlier social organisation of India at its best will be preserved whilst its adjuncts and excrescences, which have impeded the progress of a happy and healthy national life, will have disappeared.

CHAPTER V

THE HUMAN FACTOR

The wealth of a country depends ultimately on two factors, namely, the gifts of nature, including the soil, the climate, the mineral resources and the geographical location, and on the human factor, the quantity and quality of manpower or the working population. As man advances in civilisation, the influence of the environment plays a diminishing part as compared with the human factor. As society progresses, man becomes less and less dependent on the environment which he is able to modify and control by scientific knowledge. With the best natural advantages a country will make a poor show in the production of wealth, if the people are lacking in the ability to make the best possible use of the resources at their disposal.

Modern theories of population start with Malthus who wrote his Essay on the Principle of Population in 1798. Studies of animal life had already drawn attention to the tendency for animals to increase beyond the means of subsistence provided by Nature. Moreover, in Malthus' times the mechanised methods of agriculture which have given rise to the phenomenal increase in production of foodstuffs were unknown. Further the enormous increase in production of wealth which the Industrial Revolution made possible in the second half of the 19th century, was still in the making. Again, the maladministration of the Poor Laws in England was attended in Malthus' times by an

increase of population among the poorer classes. Finally on the virgin soil of America the descendants of the Pilgrim Fathers were doubling themselves in number every 25 years. These were the conditions under which Malthus enunciated his theory that there is a tendency for population in every country to increase faster than the means of subsistence. Such a tendency is attended by the operation of positive checks like increase in the death rate by wars, famines, plagues and diseases in general. If such consequences are to be averted, moral restraint and the operation of prudential considerations should be brought into play by the spread of education.

Population theories change with the spirit of the times, and are largely determined by the environmental conditions under which they are formulated. The hundred years that followed the enunciation of the Law of Population by Malthus witnessed a phenomenal increase in population in Europe, accompanied by a constantly improving standard in comfort. Marx in the middle of the last century based his theory of population on capital accumulation and institutional influences. 'Over-population,' according to him, is due not to limited productive capacity but to the maladministration of income peculiar to capitalism. In the years that followed the first world war observers of social phenomena called attention to the unprecendentedly precipitate decline in birth rates in Western Europe and the U.S.A. Unless, they said, there was an increase in net fertility, within a few decades there would be a stationary population. Not only that, but now the bogey of overpopulation is replaced by that of 'depopulation,' as there is a tendency towards a declining population. This has been contrasted with the rapidly increasing population in the Asiatic countries, and the White people are warned of the danger of a stationary or a declining population.[1]

The optimum theory of population which has been formulated more recently tells us that at any given time or under any given particular conditions, other things being equal, there is what may be called a point of maximum returns attained when the population is so exactly fitted to the circumstances, that returns would be less if it were either less or more than it is. This population has been called the optimum population. The

[1] Thus the Duke of Devonshire, Under Secretary of State for the Dominions stated in 1938: "We are all busy about armaments, but battleships, tanks, guns and rifles are no good unless we have the men, and if we continue to be faced with the decline that is going on among the English-speaking people of the Empire, then armaments can never be any good, and we shall never be able to propagate this immense heritage of ours." Quoted in 'Control of Life' by H. Sutherland, 1944, p. 32.

optimum varies from time to time as conditions determining production vary.

As Myrdal has pointed out, the optimum theory takes the average level of living as a function of population density. But nothing in it suggests that the optimum could not, for large spaces, have a very level course. "The theory is a speculative figment of the mind without much connection with this world; it does not give any guiding rule for the practical and political judgment of reality."[1]

Myrdal's view has been corroborated by the fact that there have been very few actual estimates of optimum population, and where such estimates have been made experts reveal wide differences in judgment. For example, Sauvy placed the optimum population of France between 50 and 75 millions, far above the present population. For Great Britain Jewkes concluded that a population of 20 million, far below the present figure, would permit maximum economies from the point of view of division of labour while easing the pressure of numbers against scarce resources. Whelpton placed the optimum population of the U.S.A. below the actual figure, at between 100 to 130 million.[2] An Italian expert Tagliacarne states that it is impossible both empirically and theoretically, to determine whether India and other countries are over-populated or underpopulated.

The population problem, from the point of view of any individual country, in the years immediately before us will be one of distribution rather than of production. In the West it will be concerned with the fate of vast industrial populations which may be cut off from world markets, by the industrialisation of the so-called backward countries. The student of population trends in the immediate future will be faced with the question whether each nation is entitled to a standard of living based on the richness of its own natural resources, or whether moral sentiment will require a general levelling of the standards of living by a sharing of the world's resources, and by a policy of unrestricted migration to all parts of the earth. The pooling of the world's resources in a free market to which all nations will have access, such as the Atlantic Charter contemplated, will not solve the economic problems connected with population, unless the hitherto sparsely populated parts of the earth cease to be regarded as

1 "Population—A Problem for Democracy," 1940, pp. 143-4.

2 "Determinants and Consequences of Population Trends," U. N., New York, 1953, p. 234. The U.N. publication from which we have quoted gives us an admirable and exhaustive as well as detached summary of the "History of Population Theories" in chapter III pp. 21-44.

preserves for the accommodation of the Whites. Thus, the population problem raises the question of social policy as a whole in which ethical aspects are bound to play a very important rôle.

Of late, economic theory seems to be divided between two schools of thought, one of whom revives the Malthusian limitation of the growth of world population by the availability of food resources, whilst the other regards periods of population expansion as periods of great scientific, cultural or artistic achievement as well as of economic advancement. Thus William Vogt in his stimulating work says, "Purchasing power goes back, fundamentally, to natural resources—especially the land ....There are too many people in the world for its limited resources to provide a high standard of living......There is, in all the world, not enough available untilled land to fill the net increase of 50,000 stomachs every day. And if we take care of our ecologically displaced persons additional space must be found for scores of millions now living."[1] On the other hand, we have men like Colin Clark telling us: "No political leader, however powerful, no economist, however learned, has the slightest right to interfere with the birth of children. No—it is the other way round; it is parents who have the right to demand of Prime Ministers and economists that they should so organise the world that children should have enough to eat."[2] So also Josué de Castro, a Brazilian Professor: "The road to world survival does not lie in the neo-Malthusian prescriptions to eliminate surplus people, nor in birth control, but in the effort to make everybody on the face of the earth productive. Hunger and misery are not caused by the presence of too many people in the world, but rather, by having few to produce and many to feed."[3]

In this war of experts on the question of the relation of food production to population, it is significant that both the neo-Malthusians and the anti-Malthusians charge one another with the defence of imperialism. Colin Clark sees in the supporter of Malthusian views a bed-fellow of Imperialists claiming the right of Britain to the purchase at low prices of food surpluses abroad.[4] Warren S. Thompson, on the other hand, sees in the growing population of India, with a probable 800,000,000 in three or four decades, a threat to the peace of the world, as it will then be in a

1 "Road to Survival," 1949, pp. 78 *et seq.* Cf. Osborn, "Our Plundered Planet," who confronts us with the prospect of an absolute decline in arable land and a growing world population.

2 "New Light on Population," in *The Listener*, March 26, 1953, p. 504.

3 "Geography of Hunger," p. 260, (1952). De Castro is indignant with those who talk of "sex play being the national sport of India."

4 Loc. Cit.

position to obtain by force what her people consider a fair share of the world's resources.[1] The student of economics is lost between Schumpeter who calls the Malthusian theory a bogey and Lord Keynes who attempts to revitalise it.[2] The United Nations Food and Agriculture Organisation frankly admits that in spite of local surpluses of food in North America, on a global basis the *per capita* ration is smaller today than it was in 1940. We believe that so far as India is concerned, she is a classic example of the Malthusian theory. Cannot the Malthusian theory be regarded as valid from a global point of view, each nation state aggravating the problem by insistence upon its sovereignty?

Growth and density

The population of India must have been practically stationary over long periods, in the past.[3] This stability could not have been the result solely of positive checks like plague, war and famine, regularly at work and pruning off the surplus growth. The establishment under British Rule in the beginning of the 19th century of a degree of security that was not previously experienced, as well as the economic disequilibrium that ensued, might have contributed to the growth of the population. A larger population could be supported at the prevailing standard by an extension of cultivation to unoccupied land. Sir William Hunter has stated that there was no sign of over-population in India before 1840. Support is found for this belief in the fact that there was competition for cultivation rather than for land. After 1840, the value of land has steadily increased. It is even maintained that the pressure of population has raised the value of land in many parts above the economic level, so that landowners obtain profits, not from the produce of the soil, but from the cultivators' earnings from other occupations. The fact

1 "*Scientific American*," February, 1950, pp. 14-15.

2 It is significant, however, that even an optimistic scientist like Sir John Russell refers to limitations to food production as challenges to agricultural science These limitations are utilisation of 7 to 10% only of the earth's surface, conversion by the animal of only 10 to 25% of its food into human food, and fixation by the plant of no more than 5% of the radiant energy it receives. (Presidential Address on 'World Population and World Food Supplies' in "*Advancement of Science*,' October, 1949).

3 Kingsley Davis in his "Population of India and Pakistan," Princeton, 1951, one of the more thoughtful studies published during the last few years, gives us the following table, after a careful study of whatever materials are available on the subject:

(Estimates of India's population 300 B.C. to 1871 A.D.)

Date	Millions	Date	Millions
300 B.C.	100—140	1845	130
1600 A.D.	100	1855	175
1800	120	1867	194
1834	130	1871	255

The figure for 1855 is based on an estimate of 124 million for British India given in the "Statistical Abstract for the Colonial and other Possessions of the United Kingdom, 1854-1868. "The figure is arrived at on the assumption that non-British India then constituted 29% of the all-India population."

that an increase in the cropped area has, for several decades, occurred only when new irrigation works have been constructed, is significant as suggesting that under present conditions and methods there is little scope for the extension of cultivation in response to a growing population. We shall have opportunities later on for pointing out how the increasing pressure of population on the land has given rise to some of the most serious problems connected with agriculture, fragmentation and subdivision, growing indebtedness, land hunger and landless labour.

The following table indicates the growth in population from 1881:-

Growth of Population 1881-1951

Date	Population in 000,000	Rate of Increase annual
1881	250	—
1891	279	1.16
1901	284	0.16
1911	303	0.65
1921	305	0.09
1931	338	1.02
1941	349	1.41
1941	315	—
1951	357	1.26[1]

The following table indicates the relative growth in world population by Continents from 1650 to 1947:

Population in Millions

	1650	1750	1800	1850	1900	1947
Europe	100	140	187	266	401	579
North America	1	1.3	5.7	26	81	157
Central and South America	12	11.1	18.9	33	63	153
Oceania	2	2	2	2	6	12
Africa	100	95	90	95	120	191
Asia	330	479	602	749	937	1,238
Total	**545**	**728**	**906**	**1,171**	**1,608**	**2,330**

Percentage Distribution

	1650	1750	1800	1850	1900	1947
Europe	18.3	19.2	20.7	22.7	24.9	24.8
North America	.2	.1	.7	2.3	5.1	6.7
Central and South America	2.2	1.5	2.1	2.8	3.9	6.6
Oceania	.4	.3	.2	.2	.4	.5
Africa	18.3	13.1	9.9	8.1	7.4	8.2
Asia	60.6	65.8	66.4	63.9	58.3	53.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**[2]

1 The first series of figures up to 1941 include Pakistan. The second series 1941-51 give figures for the Indian Union only. The Partition gave India 81% of total population and 77% of the total area of undivided India. Comparing the growth of population in China between 1901 and 1947, we find that China's population increased from 368 million in 1901-11 to 461 million in 1947. In other words, while China

It will be seen from the table that the population of Europe and North America increased very rapidly during the last 150 years, whilst the population of Asia shows a slower rate of growth, measured in terms of the total population. Whilst in 1750 the White population of the world was 154 million and the Coloured population 574 million, in 1947 the Whites increased to 901, the Coloured were 1429 million. The proportion of the Whites has thus increased from about one fifth in 1750 to nearly two fifths of the total population in 1947. At the same time, in spite of this great increase in numbers the standard of life of the Whites has appreciably improved, whilst that of the Coloured people has remained stationary, if it has not deteriorated.

Between 1900 and 1947 the total population of the world increased from 1,608 million to 2,330; in Western Europe the rate of increase is small, in Japan the population increased from 43 million in 1900 to 82 million in 1949, that is by 87%. So far as India is concerned, an annual rate of increase of 1.26 per cent may not be very high in itself, but its gravity can be realised as soon as it is translated in absolute figures of additional mouths to be fed. We have added in the last two decades about 81 million people, i.e., a little more than one and a half times the population of the United Kingdom in 1951, or more than 5¾ times the population of Canada, or more than 1½ times the population of a big country like Brazil whose area is about 2½ times that of India. In the last decade we have added 42 million souls, equivalent to the combined population of Spain, Portugal and Switzerland. This massive growth in our population in the context of our present economic set up is a matter of alarm rather than jubilation.

A feature of India's population growth since 1870 that calls for attention has been its sporadic character, as evidenced by the following table:

Year	Percentage increase
1881	.9
1891	9.4
1901	1.0
1911	6.1
1921	.9
1931	10.6
1941	15.0

These ups and downs can be accounted for when we remember that between 1871 and 1881 there was a big famine, another

added 93 million in 46 years to its population. India added 81 million in 20 years. (See Population Index, Jan. 1948, quoted by Satya Swarup in an article "Growth of Population in the World" in Epidemiological and Vital Statistics Report, World Health Organisation, April, 1953, p. 165).

2 Figures upto 1900 are taken from "World Population" by Carr-Saunders, 1936. Those for 1947 are added from "World Population Trends", 1920-1947, United Nations, 1949.

between 1891 and 1901, followed by plague and influenza in the subsequent decades. One can hardly talk about a normal rate of growth in the history of Indian population.[1]

The Malthusian theory, which was definitely pessimistic in its outlook, finds remarkable corroboration in our country, so far as the operation of the positive checks is concerned. We may be said to have clear evidence of the growing pressure of population on the means of subsistence. Attempts have been made to estimate population pressure by reference to the cultivated area; 2.5 acres *per capita* are said to represent the minimum size of cultivated land necessary for keeping the individual in health and efficiency.[2] Keeping in mind the fact that in many parts of India two crops are raised during the year, and that food requirements may be less in the East than in the colder countries of the West, we may safely assume that 5 acres is the minimum size of an agritural holding necessary for the subsistence of a family of five souls. Judged by this standard of one acre of cropped land *per capita* the following table bears ample evidence of over-population:—[3]

Province	Population in millions	Crop area in millions of acres	Crop area per capita in acres	Co-efficient of over-population
Bengal	50.1	23	0.47	2.1
Bihar and Orissa	37.6	24	0.63	1.58
United Provinces	48.4	36	0.74	1.35
Madras	46.7	34	0.74	1.35
Punjab	23.5	26	1.12	0.89
C.P.	15.5	24.5	1.58	0.63
Bombay	21.9	33	1.61	0.62

The situation gives us greater concern when we remember that the population in these provinces has increased faster during the last fifteen years and the situation has considerably deteriorated, due to Partition, giving us a larger proportion of the total population in relation to land.

It must be remembered, however, that food supply alone in relation to population cannot give us an adequate co-efficient of over-population. We must measure the total income of the com-

1 F. W. Notestein, in a paper contributed to "Food for the World" Edited by Schultz (Chicago, 1945) distinguishes between populations of incipient decline, like those of the U. S. A., Australia and New Zealand, in which fertility has fallen below the replacement level or those in which it is near that level, and populations of high grade potential, where rapid growth is to be expected just as soon as technical developments make possible a decline in mortality. In this second category are to be included the whole of Asia, except the Soviet Union and Japan.

2 Food and Population: Proceedings of the World Population Conference, p. 89.

3 R. Mukerjee, "Food Planning for 400 Million," 1938, p. 2.

munity. In highly industrialised countries, the total production indices in relation to the numbers can give us an adequate idea of population conditions. In the absence of a census of production in India, this line of investigation is not feasible. However, in a country like ours, where the vast majority of people are agriculturists, and where 80 per cent of the income is derived from agricultural produce, the measurement of the co-efficient of over population by reference to crop area is a useful indication of the trend of our population.

Positive Checks

That the positive checks are still operating in India in the shape of starvation and pestilences is not a political exaggeration, but can be amply borne out by figures:

Period	Frequency of Famines Number	Estimated mortality
1775-1800	3	——
1800-1825	5	1,000,000
1826-1850	2	400,000
1851-1875	6	5,000,000
1876-1900	18	26,000,000

Area And Population Affected

Period	Area in square miles	Population millions	No. employed on relief works
1888-1889	3,500	1	64,000
1891-1892	50,000	7	240,000
1896-1897	225,000	62	3,300,000
1899-1900	189,000	28	4,600,000

These figures would indicate that there has been a gradual increase in the number of people with low vitality, and consequent liability to elimination by starvation. We are told, in extenuation of British achievements in India: "Famines are no longer of frequent occurrence, or devastating in their effects; when they occur the measures taken to alleviate distress are more of the nature of poor relief, such as the provision of food for a small minority and of employment for others."[1] This improvement in the situation may be largely the result of facilities in communication. We find, however, that the situation has grown worse during the period that followed:—

Famines in the 20th Century[2] (India)

Period	Numbers affected	Deaths due to starvation
1901	50,000,000	4,000,000
1906-07	50,000,000	50,000
1918-19	150,000,000	10,000,000
1942-44	40,000,000	1,000,000
Other Years	—	15,000,000

1 O'Malley, op. cit., p. 83.

2 From Table VI in "Population Pressure, War and Poverty" by Helen R. Hinman and William R. Battin, 1945, p. 64. Cf. Andre Philip quoted in De Castro

It has been calculated that in the period 1901-44 in the whole of Asia 76,000,000 were affected by famine, in which India's share was 30,000,000. The numbers affected in Europe during the same period was 22,000,000. What is more whereas in 125 years from 1775 to 1900 the mortality from starvation in India was 40,000,000, in forty four years between 1901 and 1944 the mortality has been placed at 30,000,000. One is tempted to ask if we have not a confirmation of Malthusian postulates, after a century of progress under the conditions created by the Industrial Revolution.

So far as India is concerned there is a scarcely a year in which famine conditions do not occur in some parts of the country; and such severe droughts as do occur from time to time are followed by outbreaks of diseases, due to unwholesome and insufficient food. No careful inquiry has yet been undertaken into the mortality rates of deficiency diseases as well as diseases like dysentery, fever and diarrhoea in areas that suffer from scarcity. The Report of the Famine Commission of 1901 observed that mortality due to privation is followed by a further rise in mortality due to cholera, diarrhoea and fever, the obvious result of a weakening of the power of resistance against such attacks. It is also necessary to remember that in India the normal poverty of the population and lack of purchasing power aggravate the consequences of scarcity due to shortage of crops into consequences as serious as those of famine.[1]

Turning in the next place to epidemics as a positive check to the growth of population we have the following estimates of mortality due to bubonic plague during 1896-1920:—

Period	All-India Recorded Mortality.	Actual Estimates
1896-1901	500,000	750,000
1901-1911	6,500,000	8,775,000
1911-1921	3,022,000	3,929,000

"Geography of Hunger" (p. 156). "Famine is not always the result of an insufficient harvest, but rather of an insufficiency remaining to the farmer, after the tax collector, the landlord and the usurer have taken their share." So also: "The margin between current production and the consumption necessary for more sustenance of life at a very low level is always so small, that every year many millions of people die because of undernourishment. It follows that when crops are only a little below the average there is real famine." W. S. Thompson, Annals of the N. York Academy of Science Vol. 54, p. 735. 1952.

1 In recent years even years of bumper harvests in some parts of the country, thanks to blackmarketing practices and hoarding, have been converted into years of scarcity, in spite of rationing and compulsory procurement measures. Apart from the freaks of rainfall and geographical factors, Kingsley Davis notices other factors which play a large part in aggravating the effects of famines. "The sub-continent has been characterised by poor transportation and local isolation, which means that an affected region could not get succour from other regions. The area has had a feudal type of commercial capitalism, which means that famine conditions were exacerbated rather than helped by the operation of the price system....The Indian region has suffered from political disorder, caste barriers and cultural diversity, so that the large scale planning necessary for the prevention of famine was usually impossible." op. cit. p. 39.

Influenza in 1918 and 1919 took as many lives as bubonic plague. The total estimated deaths from influenza for these two years have been placed at 8,419,000. Messrs. Russel and Raja have estimated the mortality from influenza between 1918 and 1919 at 14,000,000.[1] Kingsley Davis places the total lives lost through influenza at 20,000,000.[2]

The divergences in estimates of deaths due to various causes in India occasion no surprise when one calls to mind the methods of registration followed in the country. Many deaths in the villages may not be registered at all. The village headman or chowkidar, an ill-paid illiterate man, occupied with multifarious duties, reporting crimes, running after officials, collects information from people who are not obliged to give it to him, is entrusted with the task of reporting the cause of death, with the result that 60 per cent of the total deaths are ascribed to "fever" and 25 per cent to other causes. In other words the cause of death in 85 per cent of the reported cases is not known. The confusion was made worse after 1919 when "public health" was a transferred subject, relegated to the Provinces, with their differences of definition and in reporting deaths.[3]

But the operation of the Malthusian check is not merely confined to the occurrence of epidemics like bubonic plague and influenza. Even an ordinary preventible disease like malaria, of which Europe has been freed during the last 60 years by the applications of medical research, took a larger toll of lives in India than bubonic plague as will appear from the following figures:[4]

1901-21

Total Deaths from Plague	Total Deaths from Malaria
8,262,365	18,361,167

Thus, it is apparent, taking even the official estimates of deaths from malaria, that its effects in our country are more alarming than the havoc caused by an epidemic disease.[5] Malaria, instead of being a serious menace, is assumed to be a normal feature of life in India. It is not, however, the direct toll of human lives but the indirect effects on mortality of this disease that should cause the gravest concern to those responsible for our

1 Quoted by R. Mukerjee, op. cit. p. 37.

2 Op. cit., appendix B p. 237.

3 "The vital statistics of causes of death are almost hopeless." Kingsley Davis, op. cit., p. 45.

4 Ranadive, "Population Problem of India," 1930, p. 100.

5 In 1936 the number of malaria cases treated in hospitals came to 12 million, about 17% of the total hospital cases (Annual Report of the Health Commissioner of the Government of India, 1936, p. 49). The 1939 Report of the Health Commissioner gave 1.5 million as the number of deaths from malaria, See footnote, p. 53. K. Davis, op. cit.

welfare. It is a truism that lingering malaria weakens the vitality of those who suffer from it, and reduces the birth rate. It is not possible to determine precisely to what extent malaria affects the birth rate. But Mr. Ranadive gives the following table in which he compares the birth rate of those areas of Bengal which are known to be malarious with the birth rate of the whole of Bengal:—[1]

	1901-11	1911-21
Birth rate in Bengal	37.60	32.8
Birth rate in West Bengal	33.48	30.2
Birth rate in Central Bengal	33.83	30.8
Deficiency in West Bengal	4.12	2.6
Deficiency in Central Bengal	3.77	2.0
Loss in Births over previous census in West Bengal	339,491	220,155
Loss in Births over previous census in Central Bengal	291,450	188,513
Total loss in births	**630,941**	**408,668**

There is no doubt that malaria constitutes one of the gravest threats to the health of the population. Col. Sinton who was Director of the Malaria Survey of India for a number of years asserted that there was indisputable evidence to show that about 100,000,000 individuals, suffer yearly from malaria in British India alone, and that about 25 to 75 million more suffer from an indirect morbidity due to malaria.

Annual deaths from malaria in India are approximately 1¼ million. In 1936, recorded figures showed a toll of 1,567,084 lives in British India. "During the past decade, cholera, small-pox and plague, the three infectious diseases which generally attract most notice, were altogether responsible for about 357,000 deaths each year, a figure which is less than one-third of the annual toll of life taken by malaria. It is therefore, certain that malaria constitutes the major public health problem in India, both from the point of view of morbidity and of mortality."[2] The Annual Report of the Public Health Commissioner for 1938 observes: "In British India as a whole the number of deaths registered as being due to malaria was 1,577,865 in 1938, of which nearly 96.4 per cent took place in rural and remainder in urban areas. The corresponding mortality rates for malaria were 6.1 mille in rural and 2.2 per mille in urban areas. The incidence of the disease in the villages appears, therefore, to have been much higher than in the towns."[3] The number of deaths reported in 1947 was 1,066,000.

1 Op. cit. p. 102.
2 Annual Report of the Public Health Commissioner for 1936, p. 49.
3 Annual Report of the Public Health Commissioner for 1938, p. 43.

As regards tuberculosis—essentially a poverty disease—the Public Health Commissioner in his report for 1938 observes: "The available evidence seems to suggest that the disease has been spreading from congested urban to the rural areas, and now constitutes one of the most important problems in India from the viewpoint of health. Like leprosy it is one of those social diseases whose control can be attempted only by a comprehensive plan of improvement of living conditions.... social measures directed towards improved housing conditions and better nutrition constitute an equally important part of the preventive campaign."[1] It is difficult to have accurate statistics about the incidence of tuberculosis. Deaths due to tuberculosis are registered both in towns and villages under fever or respiratory diseases. The estimates of deaths due to tuberculosis ranged from 450,000 to 820,000 during the period 1932-41, or from 7 to 13 per cent of all deaths. Sir John Megaw believes that the disease is increasing at a rapid and alarming rate. There can be no doubt that the low standard of living is a factor in susceptibility to the disease. It has been pointed out that there are 10,000 cases for every three million of the Indian population requiring to be institutionalised, and no country can provide for tuberculosis care on this scale—least of all India. At present there are 10,000 beds in the whole of India for tubercular patients. In 1947 the number of people suffering from tuberculosis was estimated at 2,000,000.

As regards cholera the number of deaths reported in 1952 was 45,000, the largest number being in Madras State. According to Dr. Biraud and Kaul of the World Health Organisation, "Cholera still fully deserves its qualification of "Asiatic" in the sense that it occasionally affects many countries in Asia, and because for the last thirty years, it has been confined almost entirely to that continent." They add that "India remains the most severely and persistently affected part of Assia," though the areas of cholera prevalence have in recent years shown gradual contraction. As a result of war conditions, cholera deaths were on the increase in 1941 and 1942, and reached the climax in 1943 with 460,000 deaths, a reversion to the end of the last century.[2]

The following table also shows the comparative death rates from some diseases in a few cities:—[3]

1 The King Emperor's Anti-Tuberculosis Trend and the Tuberculosis Association of India established in 1939, as well as the Anti-Tuberculosis Fund recently started under the auspices of the Central Government (1952) may be noted in connection with organised efforts against this disease.

2 Epidemiological and Vital Statistics Report, W. H. O., March, 1953.

3. John B. Grant. "The Health of India" Oxford Pamphlets on Indian Affai 1943, p. 21.

Cause		Specific Death Rates per 100,000 Calcutta	Madras	Bombay	New York	London
Tuberculosis	..	270.0	113.0	170.0	47.0	87.0
Dysentery and Diarrhoea	..	250.0	436.0	252.0	0.0	0.0
Typhoid	..	90.0	16.0	40.0	0.2	0.4
Cholera	.. ..	50.0	0.0	0.0	0.0	0.0

That the positive checks of Malthus are still in operation in India is as good a commentary on the habits and ways of life of the people of India as on the administration of the rulers of the country.

Density

The number of people that can be supported in any country per square mile depends on the stage of economic development which the country has reached and on its natural resources. A highly industrialised country can support a far larger number of people than a country like India with a population mainly dependent on agriculture carried on by methods handed down from early days. As compared with the density of countries of similar size, India has a very high density, the greatest of any country of its class in size. Greater China which has the largest population in the world estimated at about 450,000,000 for 1939 has an area three and a half times that of India.

The comparative growth of density in India becomes apparent in the following table:—

1901	1911	1921	1931	1941		1941	1951	
179	191	193	213	246	(prepartition)	261	281	(Indian Union)[1]

We give below the comparative density of population in a few typical countries:—

	Year	Density
Indian Union	1941	261
Greater China	1939	105
U.S.A.	1939	41
U.S.S.R.	1939	23
Japan	1940	496
Holland	1943	717
United Kingdom	1940	718

The density of population in any country by itself is not a correct index of the adequacy of the land to support the population dependent on it. In a country like India where cities are comparatively few and small in relation to the total population, and where farming is the main source of livelihood the concentration of population will be found to occur in regions where the soil is rich and water plentiful. This is borne out by the follow-

1 Kingsley Davis, op. cit. p. 17. "India 1953" op. cit. gives the density of the Indian Union as 312 per square mile. Partly the increased figure may be due to the growth of population, partly to the inclusion of areas not yet in the Indian Union. Even then there is an unaccountable element.

ing table which shows the distribution of the population by regions in 1951:

State	Density per Square Mile	State	Density per Square Mile
Bombay	323	Punjab	338
Bihar	572	U.P.	557
Madras	446	Rajasthan	117
Bengal	806	Himachal Pradesh	94
Travancore-Cochin	1015	Sikkim	50

It will thus be seen that the density varies from 1015 in Travancore Cochin to 50 in Sikkim.

It trus appears that the States that include areas most suited to agriculture have a density that would barely enable the people to obtain a decent living, in spite of the richness of the soil. The valley of the Ganges and the coastal regions where there is an abundant rainfall are excessively crowded. Though irrigation may increase the productive potentialities of the soil in some parts, the concentration of population in these parts leaves no great scope for improvement in living conditions.

The Census Report of 1951 institutes a comparison by means of a table between Europe and India with regard to the proportion of agricultural area and arable land to the total area:

	Area per capita (in cents)	
	India	Europe exclusive of U.S.S.R.
All land	225	307
Agricultural area	97	153
Arable land	97	92

The average European has more land *per capita* than the average Indian. The former has brought only 30 per cent of his land under the plough, whilst the Indian has brought 43 per cent of his land. Because he has got more and better land and has used a smaller fraction of it for cultivation, the European is able to have 61 cents of agricultural land under permanent meadows and pastures. The pasture lands provide a supply of milk, milk products, beef, mutton and other food stuffs for which there is no parallel in India.[1]

Birth Rate and Death Rate

The increase of population in a country is a function of two variables, the death rate and the birth rate. The survival rate gives us the net increase of population, that is, the difference between births and deaths. For the purposes of comparison the number of births is commonly expressed by a birth rate—the number of births per annum per one thousand of the population. A population may increase by having a large birth rate and a

1 Census of India, 1951, Vol. I, pp. 39-40.

large death rate, or it may increase by a comparatively small birth rate accompanied by a correspondingly small death rate. The following table indicates the trends in birth rates and death rates in a few countries:[1]

Declining Birth and Death Rates
(per 1,000 of population annually)

	Birth Rate				Death Rate			
Country	**1881-91**	**1921-25**	**1926-30**	**1931-35**	**1881-91**	**1921-25**	**1926-30**	**1931-35**
U. K.	32.5	20.4	17.2	15.5	19.2	12.4	12.3	12.2
Sweden	39.1	19.1	15.9	14.1	16.9	12.1	12.1	11.6
Germany	36.8	22.1	18.4	16.6	25.1	13.3	11.8	11.0
France	23.9	19.3	18.2	16.5	22.1	17.2	16.8	15.7
U. S. A.	—	22.5	19.7	17.3	—	11.8	11.8	10.9
Japan	27.2	34.6	33.5	31.6	19.9	21.8	19.3	18.1
India	35.9	32.7	33.3	34.4	27.4	26.0	24.3	23.3

It will thus be seen that there has been a definite downward tendency in Western countries in the birth rate and the death rate whilst, on the other hand, there has been not only a persistently high birth rate in India but a correspondingly high death rate. Moreover, even these birth and death rates are probably underestimates.[2]

The following table shows the trends in birth and death rates during 1936-50:[3]

Birth and Death Rates 1936-50

	Birth Rate			Death Rate		
Country	**1936-40**	**1941-5**	**1947-50**	**1936-40**	**1941-5**	**1947-50**
U. K.	15.18	16.2	17.97	12.66	12.94	11.67
Sweden	14.8	15.4	17.77	11.68	10.64	10.15
France	14.8	15.4	20.92	16.28	17.32	12.95
U. S. A.	17.3	20.16	24.37	10.96	10.60	9.82
Japan	28.78	24.82	32.25	17.28	18.88	12.27
India	33.3	28.3	26.0	22.14	22.76	17.22

The birth rate in Western countries has during the last ten years shown an upward tendency. This can be accounted for by remembering that the marriage rate usually rises during and immediately after a war. This is, however, likely to be a transitory phase, which will give place again to the trend towards a declining birth rate.[4]

1 League of Nations Statistical Year Book, 1941-42.

2 According to Dr. Gyan Chand, the normal birth and death rates in India are 48 and 33 per mille respectively, as an addition of 33 per cent for the birth rate and 30 per cent for the death rate in order to get a reasonable approximation to the facts is necessary. The accuracy of official statistics has been often challenged of late. Thus D. Gosh in his work "Pressure of Population and Economic Efficiency" points out that a good proportion of the births and deaths that happen in the country escape the official records and maintains on the basis of indirect calculations based on life table populations that the birth rate may be nearer 40 per thousand than the official rate of 34 per thousand. Pp. 3-4.

3 Demographic Year Book, 1952, United Nations.

4 Cf. In 1946 the Census Bureau in the U. S. A. made a sample survey of the rising birth rate. The Bureau found that many couples in the depression years had delayed marriage. Many war time marriages were contracted ahead of schedule and there was a large preponderance of first and second births in those high fecundity years. (Human Fertility R. C. Cook pp. 228-9).

The unsatisfactory character of our official returns with regard to the birth rate and death rate has been acknowledged with excuses by the Census Commissioner. The registered birth rate for 1941-50 is deduced to be 27.2, when the correct level is 40. "Evidently 32 per cent of all births escaped registration during 1941-50 (apart from the fact that the births occurring among a quarter of the population were not attempted to be registered at all). Similarly the registered deaths yield a death rate of 19.4 when we have reason to believe the true death rate was 27. It follows that 28 per cent of all deaths escaped registration during 1941-50 in the areas where registration was being effected."[1] This marked and regrettable deterioration in the efficiency of registration, we are told, by way of solace, need not cause any surprise. During the war and some years thereafter the administration was loaded with too much new work in connection with the prosecution of war, and later with the problem of keeping food supplies moving and prices under control. Routine work, therefore, suffered. Let us hope the youthfulness of our democratic organisation may not offer scope for a similar apology when checking up the birth and death returns of 1951-60!

Kingsley Davis in his well-known study of the population of India and Pakistan discussing the inadequacy of official statistics concerning the birth rate pointed out four major defects: (1) The Registration covered only three fourths of the population; the regular birth statistics related only to British India and not to the Native States. (2) The published rates until 1932 were calculated on the basis of the population under registration at the last census, omitting estimation of mid-year populations on the basis of natural increases. (3) The rates were not published according to the age of the mother (4) Birth reporting was incomplete. In British India the number of births reported was, on the average, between 25 and 50 per cent below the actual number. "To understand why this deficiency existed and still exists, we have simply to recall the illiterate, rural character of the population, and the man, the village watchman, who usually serves as registrar." "No where can the official figures be accepted as representative of the total number of births."[1]

Summarising the situation with regard to the death rate today, Davis draws by no means a rosy picture. "All the scientific short cuts known to man cannot divorce the death rate from economic and demographic realities." A reduction in mortality

1 Census of India 1951, pp. 183-184.
2 Kingsley Davis, op. cit. p. 67.

reacts on the entire bio-social situation...."An old cause of death is not banished for ever simply because it is banished temporarily. Unless changes were soon made in the economic and social institutions, in the Hindu Moslem pattern of life,....there would be the danger that no change would be made in the fertility of the people. There would, then, be the possibility that famine, war, epidemic disease and malnutrition would again stalk the land. These dangers are already present....Our argument is not that further declines in the death rate are impossible or improbable, but rather that a continued low death rate without a modern economy and a civilised fertility is inconceivable."[1]

The causes that determines the birth rate may be briefly considered under three heads, namely, (1) environmental causes, determined by climate and physical surroundings, (2) economic conditions or causes and (3) the socio-religious outlook of a people.

(1) It has been pointed out that the births in any year fluctuate according to months. In tropical countries with early child marriages the birth rate may be higher than in colder countries where puberty is late in arrival and marriages take place at a maturer age.

(2) More important is the economic factor. It has been repeatedly pointed out that people of little means tend to have larger families than the well-to-do. The poorer an individual or a class, the larger the size of the family. Where there is no stake in life, the arrival of an additional child is a source of additional income, as the child may be put to work at an early age to supplement the meagre resources of the family. Poverty has been usually associated with lack of education, the absence of prudential considerations and a consequent attitude of irresponsibility in relation to marriage and procreation. On the other hand, the history of Western countries shows that an improvement in the standard of living, after a particular level is reached, is always followed by a fall in the birth rate. Prudential motives play a larger part, reinforced by education. Thus in the U.S.A. Negro families are found to have larger families than the Whites.[2]

1 *Ibid.*, p. 61.

2 It has been pointed out, however, that frequently the causes which lead to a rising standard of living also lead to lower death rates and rapid population growth. In the long run the attainment of a high standard leads to a reduction of the birth rate, thus leading to a stationary, if not a declining population. Thus it was about five to six decades after Japan began to industrialise and to move her people to the cities before there was any significant decline in the birth rate for the country as a whole. Similarly it was about a century before the birth rate in England and Wales showed the effects of their industrialisation and urbanisation.

(3) Equally vital as a factor influencing the birth rate is the socio-religious outlook of a class or of a country. Thus in India, as in some of the South European countries, the birth rate is very largely influenced by social conditions and customs associated with marriage. In India marriage is universal. In 1931, 467 males and 493 females out of every 1,000 were married, that is, if we take into account widowers and widows as well as ascetics and mendicants, almost every person of marriageable age was actually married. Phenomenal as the poverty of the Indian people is, economic considerations appear to be of secondary influence with regard to marriage. Even to-day marriages are arranged without the parties having any say in the selection of their mates, and in most cases without regard to resources and prospects. In India poverty does not act as a deterrent in the matter of marriage. Marriage in India is sacramental. To have a large family is an indication of the blessings of the Gods. A father would regard it as a disgrace if he did not settle his daughter in marriage, before the age of 15. Moreover, early marriage has also been regarded as a cause that influences the birth rate. Most of the women who marry in India are married before they are 20, and most women in India bear most of their children before they are 30.

The custom and institution of child marriage have been the product of later times in India. The Age of Consent Committee calculated that about 50 per cent of the girls get married before they complete their 15th year. Early marriage has undoubtedly had not only serious consequences on the health of the married girls, but has been responsible for the enormous number of widows in the country. It is also to be remembered that marriage below the minimum age laid down by the law still persists. The number of infant widows in 1931 doubled, a fact which was due to the number of baby girls under the age of one year who were married off in 1929-30 and lost their husbands. The Child Marriage Restraint Act was passed in September, 1929, and was to take effect from the 1st April, 1930. The interval was utilised for forestalling the Act and this led to the increase in the number of married girls from 8.5 million in 1921 to 12.7 million in 1931. The 1951 Census Report states that between 1931, the passing of the Child Marriage Restraint Act, and 1951 as many as 9.2 million marriages were contracted in contravention of the law. Curiously enough, it may be noticed that it is comparatively recently that the age of consent has been raised in England from 14 to 16—Actually it was still legal in England in 1928 to marry

a girl of 12. It has also to be remembered—not that we desire to advocate child marriage—that the elimination of early marriages would increase the potential fertility of the young men and women when mature.

If the institution of child marriage in the past was the outcome of changes in the social and political conditions of our society, there is no reason why a fresh reconstruction of ideas with regard to the age of marriage may not be possible for us. If we are to avoid the dangers that threaten society in the shape of a gradual degeneration of the population, due to the enfeeblement of the mother and a heavy death rate of females in the child bearing period, we can do so only by raising by a couple of years more the age at which girls can enter married life and by the rapid spread of education.

Thus the factors which are responsible for a high birth rate in India are the institution of early marriage and the universality of marriage. The poverty of the population may be a contributory factory as in the case of Ireland; but, as in Ireland Catholicism with its conception of marriage, so in India the religious ideas associated with marriage constitute the governing factor in the determination of the high birth rate. The sterilisation of widows of child bearing age, by the custom that regards widow remarriage as a sin, influences the birth rate by preventing it from becoming higher. "The high birth rate in India is a part of our culture, and it is only when the moral sentiments of the community change either by choice or the force of circumstances that a fall in the birth rate comparable with the fall which has taken place elsewhere can be expected."[1] The birth rate in India is intimately linked up with its social institutions which ultimately involve the degradation of the social status of women. Not until women in India enter into their own and reach a status of equality with men in all the relations of life can we expect a radical change in birth rate trends.

The number of births in a country has an important bearing on its social conditions, just as the social conditions influence in turn the number of births. In France the low birth rate results in a population of high productive power, but with no good prospects for the future. A low birth rate is an evil, if it leads to future low productive power or to social immorality. A high birth rate is an evil, if it overburdens the productive power and leads to a condition of persistent poverty. The way

1 Gyan Chand, "India's Teeming Millions," 1939, p. 145.

in which a community grows, whether by a high birth rate and a high death rate, or by a moderate number of births and few deaths, is to some extent an indication of the stage of civilisation in which that community finds itself. A high birth rate and a high death rate in themselves are evidence of an enormous wastage of life. In India for example what this means is that 17 or 18 people have to die in order that 7 or 8 should survive for every 1000 of the population.

The fertility rate is determined by the number of children born every year to 1,000 women of child bearing age (15-45). Whilst the fertility rate remains the same, the birth rate may fall. If instead of 240 women of child bearing age there were only 120 out of every 1,000 population, the fertility rate may remain unchanged, but the birth rate would be halved. In all countries in determining the fertility rate the distribution by age of reproductive women has to be taken into account as an important factor.

A special enquiry was carried out in 1931 in India to ascertain the fertility rate. The enquiry showed that taking the average in the thirty years of child bearing period a woman who completes the period has 6 to7 children. The following table may be sufficient to illustrate the conclusion:

Number of children born per woman in case of completed fertility

Province or State		Province or State	No. of Children
Assam	6.7	C.P.	6.7
Bengal	6.0	Baroda	6.0
Bombay	6.1	Mysore	7.0
Punjab	6.4	Travancore	6.4

The data regarding the fertility rate in India are meagre. Taking the data of Cochin for 1931 we get the following comparative figures:—

Age period	Cochin	England and Wales
15-19	224	372
20-24	249	267
25-29	257	187
30-34	246	127
35-39	182	81
40-44	120	33
Total fertility	6370	5335

The disparity between the birth rates of India and England and Wales is very great, that between the fertility rates is very small. The average Indian woman bears about 6 children as against 5 of an English woman. But taking into account the wide prevalence of birth control measures among the English we can conclude

that an Indian woman is not more fecund than an English woman but rather less fecund.[1]

In the West attention is sometimes called to the differential birth rate. The birth rate, it is pointed out, is higher among the lower and poorer classes than among the upper classes who are assumed to be biologically superior. There have been gloomy forebodings about civilisation committing suicide, by the refusal of the better endowed classes to multiply. Birth control methods have facilitated the low birth rate amongst the upper classes. In India the birth rate of the different castes and classes cannot be accurately determined. But from the tables compiled by the special enquiry of 1931 it would appear that there is no evidence that the upper classes have a lower birth rate, as the following table shows:—[2]

	Average number of children born per family
Agriculturists	4.4
Industry	4.2
Profession	4.3
Law, Medicine and teaching	3.7
Public Administration	3.9
Average for all occupations	4.3
Brahmins	5.2
Kayasths	6.3
Depressed castes	4.1

The figures supplied by the Census Report would indicate that the situation has not radically altered in the interval. The average number of children per family in 1951 is 4.3 for rural population and 4.2 for urban.

The Census Report 1951 gives us also the following Child Birth indices table:—

Maternal group	Age 45 and over	All Ages
Agricultural landholders and tenants	6.7	4.5
Agricultural labourers	6.3	4.1
Non-agricultural families	6.6	4.2

These tables bear witness to the tendency of the people of India to multiply to the limit of their capacity. All classes and castes exercise their procreative impulses to the full. Looking at the future of the birth rate in India the conditions which make the birth rate high, nay, about the highest in the world, are not likely to be modified in the immediate future. Radical social changes are not in themselves impossible; a force like the personality of Gandhiji may set in motion very rapid changes. Social reforms are growing in strength and in volume. The

1 Ghosh, op. cit., pp. 15 and 17.
2 The table has been abstracted from Gyan Chand, op. cit. pp. 157-9.

status of woman has been raised. The general attitude of people towards life is becoming more rational and critical. The use of contraceptives is increasing and is likely to increase further among the educated classes. But it is difficult to predict with certainty the future course of population trends.

When we think of reducing the birth rate in our country by raising the level of income through increased production, we should not lose sight of certain factors that enter into the situation and preclude the immediate possibility of reduction of the birth rate. These factors we have already emphasised. As a matter of history in the last two or three decades a strong Government, improvement in the methods of transport and communication, control of epidemics and sanitation on not a very ambitious scale and a colonial policy that has led to the development of our country as a source of raw materials and a market for manufactured goods, have all alike contributed to the growth of our population, without substantially increasing the levels of living. Add to this the opposition to the taboo on widow remarriage, and a policy of religious neutrality that has supported a socio-religious organisation favourable to high fertility. "A gradual rise in production in India" might reduce mortality without a change in birth rate and accelerate the growth of population, "unless in some way there comes a change in the whole institutional structure and culture of the Indian people—all the factors that are essential to any really rapid economic progress and to the control of fertility. It is difficult to conceive of India making this change in culture, which involves a sharp break with its burdensome religion .... and the inertia of this vast people, without going through Some kind of a dynamic upheaval."[1]

Kingsley Davis, summarising the problem of fertility rate in India, asks: "will fertility be brought down in time to avoid either a disastrous growth of population or a calamitous rise in the death rate?" He is led to a negative conclusion. Urbanisation has not inaugurated a decline in the birth rate. The superiority of Moslem fertility is due to their greater toleration of widow remarriage. Indian fertility though high does not approach the maximum allowed by biology, as it is controlled by indirect institutional customs, such as the taboo of widow remarriage. Under Western influence the effect of these controls will be lessened. No sharp decline in the birth rate can be expected, until control by contraception, abortion, etc., is inaugurated. There is no evi-

1 "Food for the World," ed. by T. W. Schult, Chicago 1945—Papers and discussion by Notestein and Lorimer, pp. 50, 66.

dence that such methods are being adopted today. One reaches "the melancholy conclusion that an early decline of fertility seems unlikely."[1]

When we turn to the death rate in relation to the birth rate, as we have already stated, the same net increase of population may be attained by a large birth and death rate as by a small birth and death rate. We think of the former as characteristic of half civilised conditions, and of the latter as more or less the ideal aimed at by civilised life. The death rate is an index of the condition of the community from year to year. Wars, epidemics and economic depression are reflected in an increased death rate, while a low death rate is an index to economic prosperity and the application of scientific knowledge to the problems of health. The death rate varies according to sex and age, in different climates, among different races, in different occupations. It is an index of the resisting power of the community in times of economic distress. When the death rate fluctuates, from year to year, and with changing conditions, it shows that the community has no resisting power against the forces of nature.

In India the recorded death rate of 25 per 1,000 is said to be lower than the actual death rate which is near 33 per 1,000.[2] In 1918 the recorded death rate rose to 62 per 1,000 owing to the influenza epidemic. The record in that year was defective owing to the breakdown of the reporting machinery. A more reliable index to the actual death rate is afforded by life tables as below:—

	1881	1891	1901	1911	1931
Male	42	41	42	44	37
Female	39	39	42	43	38

The survival rate in India has been higher than that of some other countries of the world since 1921. The following table gives us comparative figures:—

Survival Rates

	1891-1901	1901-11	1921-25	1926-30	1931-35	1947-50
United Kingdom ..	11.7	11.8	8.0	4.9	3.3	6.30
Sweden ..	10.7	10.7	7.0	3.8	2.5	7.62
France ..	0.6	1.2	2.1	1.4	0.8	0.03
U.S.A. ..	—	—	10.7	7.9	6.0	14.55
Japan ..	8.9	11.4	12.8	14.2	13.7	19.98
India ..	4.1	4.3	6.7	9.0	10.9	8.78

1 Kingsley Davis, op. cit., pp. 81-82.

2 High as the death rate, recorded or estimated, is, there has been a fall in mortality after 1921. It has declined from 41 per mille in 1881-1891, to 36 per mille in 1921-31 and 22 per mille in 1941-45. But whilst the death rate has declined, the birth rate has remained unaffected. The 1951 Census report puts the average birth rate for 1941-50 at 40 and the average death rate for the same period at 27.

The survival rate for 1911-20 has been omitted from the table owing to the abnormal conditions which prevailed during the war period. The survival rate of India from 1931 is, next to Japan, the highest in the world. The sudden rise in U.S.A. for 1947-50 seems to be a temporary post-war phenomenon. If in the earlier decades it was abnormally low, this was due to the outbreak of epidemics like bubonic plague and influenza, and to the mortality which resulted from frequently recurring famines. The reduction of the death rate is according to some writers like Mr. Wattal, dependent upon a reduction in the birth rate. It is frequently argued that a high birth rate is necessarily followed by a high death rate. This is not quite accurate. In England from 1871 to 1892 there were five years in which the birth rate rose. In three of these there was a rise in the death rate, but in the other two a fall. So also in India, in 1910-17 and 1922-30 the birth rate was higher and the death rate lower than usual. If deaths due to famine are less numerous than in earlier years, this is due not so much to improvement in food supply as to improvement in transport and organisation. In a country like India where the resisting power of the people against diseases is so low, due to under-nourishment, the death rate in the future may even go beyond the recorded death rate in 1901-11 or 1918-19. As the Director of the Nutrition Research Laboratories, Coonnor, observes, "Half the mortality recorded in India occurs in children under ten years. Malnutrition is one of the chief causes of the rapid exit of young human beings from the world so soon after their arrival in it."[1]

Apart from climatic conditions the factors that are responsible for a high death rate in India include ignorance with regard to health conditions, superstition, the inadequacy of medical institutions and relief, and the poverty of the people.

Discussing the factors that contribute to high mortality in underdeveloped areas, the U. N. Report on the Determinants and Consequences of Population Trends observes: "High mortality is associated with low *per capita* income, high rates of illiteracy, a large proportion of males engaged in agriculture, and a large number of persons per physician . . . Although statistics are rarely available for other factors such as housing conditions, nutrition, public sanitation, etc., it is probable that similar relationships between these factors and different levels of mortality would obtain.[2]

1 Quoted in "The Health of India," Oxford Pamphlet, p. 8.
2 p. 49.

(1) The high rate of infant mortality can be attributed to ignorance and the inability and unwillingness of the people to avail themselves of maternity services. There is normally speaking utter ignorance of the simple laws of health and of the importance of cleanliness. But it would not be true to assert that a low birth rate is necessarily linked with a low death rate in the case of infants.[1]

(2) It is also true that in India there is a lack of dispensaries and hospitals, of medical assistance and of preventive health measures, on a scale commensurate with the needs of the population.[2]

(3) It is a truism that a man of limited resources can do more for his children when they are few than when they are many. For a people so deeply sunk in poverty as our own, it is impossible to take adequate care of the children, in the shape of feeding, nursing and medical assistance, even if they were educated and familiar with the laws of hygiene and sanitation.

(4) More vital as a factor in reducing the death rate is collective or state action in the shape of the provision of better housing conditions, of sanitation in towns and villages, of an efficient medical service equipped with liberal supplies of drugs, and of hospitals and sanatoria. A government that spends crores on defence can spend on education and sanitation. A government that can raise loans for irrigation and railway development can equally raise loans for the provision of better houses and drainage and free dispensaries.[3]

The resources that a government can command will be determined by the resources of the people, and the latter cannot be increased substantially if increase in productive resources is accompanied by a corresponding, if not a faster, increase in num-

1 The comparative figures of infant mortalitp for a few cities reveal the vast scope for improvement in India:

Infant mortality rates per thousand live births

Calcutta	Madras	Bombay	New York	London
212.9 (1931)	205.8 (1931)	201.4 (1931)	30.8 (1941)	48.0..(1940)

The following table gives us a comparative view of infant mortality 1949.

India	U. K.	U.S.A.	Japan	France	Sweden
122.8	34.1	31.3	62.5	60.2	23.3

2 We have one doctor to 6,300 of our population, one nurse to every 43,000, one health visitor to 400,000, and one midwife to 60,000, as compared to U.K.; where the ratios are one doctor to 1,000, one nurse to 300, one health visitor to 4,770 and one midwife to 618. The total number of doctors available now are 47,400, out of whom 34,400 are in private practice, the majority being concentrated in urban areas. The total number of beds available in British India is about 73,000, that is one bed to every 4,000 of the population, whereas in England and Wales there are 7 for every thousand. (Report of the Health Survey and Development Committee, 1946, Vol I, pp. 13-16).

3 It may be noted that the Government of India is setting up a penicilin factory at Poona with assistance of 850,000 dollars by U.N.I.C.E.F. The Bombay Government is setting up a DDT factory, and the Haffkin Institute in Bombay is manufacturing Sulpha drugs.

bers. With our limited resources even a progressive national government will find itself crippled in the task of reducing the misery involved in a high birth rate if the population increases at the rate of one and a quarter per cent a year. "The task of dealing with the accumulated arrears of the past is itself colossal and a vivid appreciation of the fact cannot but intensify the widespread desire for a radical change in our whole economic and social system. But if the magnitude of the task is increased every year by the birth of nearly 10 million babies, one fourth of whom do not survive the first year of their life, and nearly one half of whom do not live even up to the age of ten—leaving nothing behind except a sense of frustration, an incalculable loss of vitality and human happiness, accompanied, of course, by absolute waste of all the resources involved in giving them all too brief a lease of life—even radical changes, whatever their nature or range, will fail to provide the irreducible minimum for a healthy and civilised existence."[1]

It is obvious that so long as we have a high birth rate, it is difficult to think of any immediate change for the better in our material condition.

The Net Reproduction Rate

During the last fifty years there has been a definite decline in fertility in almost all countries inhabited by the Whites. Whilst the average number of children born to a married woman passing through child bearing age is now 5 to 6 in Russia, and about 3 to 4 in South Eastern Europe, it is about 2 in most countries of Western and Northern Europe, in the U.S.A. and in Australia. Two governments which were particularly worried about the declining fertility—Italy and Germany—tried to encourage the raising of large families by taxing bachelors and married couples with no or few children, by granting exemption from taxes to employees with large sized families, by granting birth premia, by giving preference in government service to men with large families. But the adoption of these measures has not been attended with the success that was anticipated; and economists have called attention to the need for considering not the fertility rate but the net reproduction rate to establish a true balance of births and deaths.[2] This rate shows the average number of future mothers

1 Gyand Chand, op. cit. pp. 173-4.

2 As Kuczynski observes, "The pertinent question is not: Is there an excess of births over deaths? but rather: Are natality and mortality such that a generation which would be permanently subject to them, would during its life time, that is, until it has died out, produce sufficient children to replace that generation?

born to a mother of today. If this rate is one, it means that the present generation of females will, on death, have been fully replaced by the new born girls, and the population will remain constant. If the rate is above one, the population will increase. If it is below one, the population will decrease.[1] Judged by this standard we obtain the following results:—

Net Reproduction Rates in Different Countries[2]

U.K.	1920	1.265	Australia	1921	1.313
	1930	0.840		1930	1.130
	1935	0.764		1935	0.945
	1940	0.772		1940	1.017
	1946	1.111		1941	1,244
	1947	1.205		1946	—
	1948	1.070		1947	1.364
U.S.A.	1930	1.091		1948	1.326
	1935	0.975	France	1920	0.980
	1940	1.023		1930	0.930
	1943	1.190		1935	0.870
	1946	1.359		1938	0.910[3]
	1947	1.524		1946	1.270
	1948	1.462		1947	1.310

Working on the assumption, that the net reproduction rate continues to fall at the same rate as between 1920 and 1935, it was estimated that the population of England and Wales which in 1938 was 45 million would decline to 38 million in 1975 and 20 million in 2035; that of France which was nearly 42 million would decline to 30 million in 1975.

It is difficult, if not impossible, to ascertain the net reproduction rate for India. Statistical information bearing on the number of girl babies born to women in different age groups is not available. In the absence of such data we can fall back upon the fertility rate of growth of population. Unless nature relieves us of a growing population by epidemics, or a rapid and marked improvement in economic conditions leads to a fall in the rate, the probability is that greater accentuation of poverty and epidemics, would increase our numbers, as the birth rate is not likely to be affected in the near future. However rapid the tempo of economic development—and this by itself is a pious

The pertinent question is: Are natality and mortality such that 1000 newly born girls will in the course of their lives give birth to 1000 girls?" Balance of Births and Deaths," Vol. I, p. 41.

1 Kuczynski, 'World Population' in "The Population Problem," 1938, p. 113. The fertility rate is the number of births per 1,000 women between the ages of 15 and 45. If on an average every woman who reached the age of 45 or over was survived by one girl child, the population would be exactly reproducing itself and the net reproduction rate would be 1. A rate of 1 means that on an average every 100 women between 15 and 45 will be replaced by 100 women of the same age. A net reproduction rate of .75 means that every 100 women of child-bearing age (15-45) are survived by only 75 girls.

2 "Demographic Year Book, 1949-50" U. N.

3 Figures for the intermediate years are not available.

wish—it is not likely to raise the standard of living to that level at which it might affect the size of the family, so far as the masses are concerned. It is obvious, therefore, that the demographic problem in the coming two or three decades will be that of the impact of a progressively increasing population on our ill-balanced and deteriorating economic and social structure.[1]

The following table from Census of India, Paper No. 3, (1949)[2] showing the estimated probable addition to the population as a result of a decrease in infantile mortality in the next decade is of great interest in this connection:—[2]

No. of additional persons likely to be enumerated at each census year

Source of addition to population	1931	1941	1951	1961 On the assumption of projected trend of 1920—46.	1961 On the assumption of an additional decrease of 25% in infant mortality rate.
Additional saving of infants due to reduction in infant mortality	672,995	2,497,613	5,031,625	8,365,539	10,059,680
Births occurring among surviving infants					
(a) First generation		17,884	441,964	1,954,338	1,954,420
(b) Second generation			12	9,532	9,532
Total ..	**672,995**	**2,515,497**	**5,473,601**	**10,329,409**	**12,023,632**

Thus, a 25% fall in infant fortality rate during 1951-61 would result in adding 12,000,000 to India's population at the census of 1961. "It must be pointed out that large as the estimates of additions are, they err on the side of underestimates, the important reason being that while we have taken into consideration the expected decrease in infant mortality rate no allowance has been made for decreases that may occur at the higher age groups also."[3]

The Census Commissioner in the all-India Report on the Census of 1951 attempts an estimate of the future growth of population in India. He limits the forecast to the three decades ending 1981. His calculations are based on two alternative assumptions: (a) that during each of the three decades 1951-60, 1961-70 and 1971-80 the mean decennial rate of growth will be the same as that of the average of three decades 1921-50; (b) that the mean decennial rate will be the same as that of the latest of

1 Mr. D. Ghosh calculates the net reproduction rate at 1.1 by applying the specific fertility rates of Cochin to the all-India life table of female population in 1931. Op. cit. pp. 25-26.

2 "Probable Effect of a Decrease in Infantile Mortality on the Future Population of the Union of India" by Dr. Satya Swarup, p. 3.

3 *Ibid.*

the three decades. These two alternative assumptions yield the lower and upper limits of the probable future figures. The following table gives us the results of the forecast:—[1]

Year	Lower limit in millions	Upper limit in millions
1951	361	361
1961	407	411
1971	458	469
1981	527	535

These calculations are sought to be corroborated by a forecast of the population for the same three decades of three States—Uttar Pradesh, Madras and Madhya Pradesh—and assuming that the results can apply to the country as a whole. The forecast of the three States is based upon a division of the population into three broad age groups and sub-division by sexes. The results applied to India as a whole are indicated in the following table:—

Year	in millions	Increase in millions during preceding 10 years
1951	361	44
1961	407	46
1971	452	45
1981	515	63

CHAPTER VI

THE HUMAN FACTOR—(Continued)

Distribution of Population between City and Country

In a country with a balanced economy the population is fairly evenly distributed between the towns and rural areas. The concentration of population whether in the rural or in the urban areas gives rise to serious problems of an economic, social and political character. India had a fairly evenly distributed population even as late as the first half of the 19th century. The villages were self-supporting autonomous units, regulating their communal affairs through panchayats. The cities were the centres of industries fostered by the rulers, small and large, who supported a large number of officials and favourites in comparative splendour. These princely courts created demand for artistic products and, along with the wealthier merchants and landowners who surrounded them, employed a fairly large number of merchants and middlemen and craftsmen. These urban centres obtained their foodstuffs from the rural districts around them in exchange for the manufactured products.

1 Census of India, 1951, pp. 177 *et seq.*

The Industrial Revolution in Europe brought with it far reaching changes in the distribution of population. The artisans and craftsmen who were deprived of their means of livelihood due to the introduction of machinery were absorbed in increasing numbers into the rapidly multiplying factories. Large numbers from the rural areas were attracted to the already congested cities. The improvement of farm implements and the introduction of machinery into farming contributed to the migration from the village to the city, a migration which was facilitated by improvements in communication. Thus in the West the era of machinery and large-scale production resulted in the urbanisation of the population. In India, on the other hand, the introduction of cheap machine-made goods and the imports of manufactured commodities from abroad led to the destruction of handicrafts in the towns and cities. The urban population that made a living out of these crafts were compelled to fall back on the land as the only means of livelihood. Our country was transformed from a manufacturing and industrial into a predominantly agricultural country.

It is also to be noticed that most of the urbanisation that exists in India to-day is commercial rather than industrial urbanisation. Urbanisation in India to the extent to which it exists is not the result of indusrialisation. It is the artificial result of an artificial economic evolution. A number of cities have grown into their present size because they were important railway junctions and distribution centres like Nagpur and Cawnpore, the centres of British administration and the head-quarters of Government departments. The growth of many of the modern cities is only incidental to the evolution of transport. Until the middle of the 19th Century Bombay was little more than "a mere collecting centre for the trade of the smaller parts of the West Coast."[1] The growth of Karachi was largely due to its importance in the economic life of Western India as a distributing centre connected with the Punjab by railway. Cawnpore owes its importance to the fact that it is an important railway junction and "a convenient distributing centre for the imports of Manchester piece-goods, hardware and machinery from Bombay and Calcutta."[2]

The following table shows the growth of population in some of the principal cities of India:—

1 Handbook of Commercial Information for India, p. 70.
2 *Ibid* p. 110.

Cities	Population 1931	1941	1951	Percentage variation 1901-11	1911-21	1921-31	1931-41	1941-51
Calcutta with Howrah ...	1,389,000	2,488,000	2,982,307	+ 11.0	+ 4.3	+ 11.9	+ 79	+ 19.8
Bombay ...	1,161,000	1,695,000	2,839,270	+ 26.2	+ 20.0	— 1.2	+ 28	+ 50.5
Madras ...	647,000	777,000	1,416,056	+ 1.8	+ 1.6	+ 22.8	+ 20	+ 58.2
Hyderabad (Deccan) ...	467,000	739,000	1,085,722	+ 12.0	— 19.0	+ 16.0	+ 58	+ 38.0
Delhi ...	447,000	522,000	914,790	+ 11.6	+ 30.7	+ 47.0	+ 23	+ 54.7
Ahmedabad ...	310,000	591,000	788,333	+ 16.6	+ 26.4	+ 14.5	+ 91	+ 28.6
Lucknow ...	275,000	387,000	496,861	— 1.6	— 4.6	+ 14.2	+ 41	+ 24.8
Amritsar ...	265,000	391,000	325,747	— 6.0	+ 4.9	+ 65.3	+ 48	— 18.2
Cawnpore ...	244,000	487,000	705,383	— 12.0	+ 21.2	+ 12.6	+ 99	+ 36.6
Nagpur ...	215,000	302,000	449,099	— 21.0	+ 43.0	+ 48.0	+ 45	+ 39.2

According to the Census of 1941, 23 cities had a population over 200,000, as compared with 17 cities in 1931. In 1951 the number increased to 32. Whereas the percentage of the urban population in 1931 was 11 per cent of the total population, it increased to 13 per cent in 1941, and 17.3 per cent in 1951. There has been a distinct trend during the last twenty years towards the migration of the population to towns and cities, accentuated in the last decade owing to the war and the influx of refugees after Partition. The growth of urbanisation and the imposition of a competitive system on a self-subsistent type of production have disturbed the economic isolation of the villages, and created a capitalist system involving a seasonal labour market and the exploitation of the masses. Whilst we have not enjoyed so far the benefits of industrialism to a great extent, we have reproduced in our cities all the evils associated with overcrowding, slums and unemployment. Recently, the Central and Local Governments as well as municipal bodies have been active in removing these evils and planning city development.

The growth of population in cities can hardly be regarded as due to natural increase. The city population has a lower birth rate than the rural population. The death rate in cities is likewise higher than in rural areas. This is to be expected when we remember that cities are insanitary and the diet is poorer than in the country. We can only conclude that the growth of population in the cities is largely due to migration. We have no satisfactory statistics of such migration. The Census every ten years is our only guide, unsatisfactory as these returns are. The Census of 1931 lists the percentage of city residents in different provinces who were born outside the cities. Davis gives us an average of 37.3 per cent born outside the cities on an analysis of figures of the total population of 26 cities.[1] "More than a third of the inhabitants of India's major cities are

1 Kingsley Davis, op. cit., Table 49, p. 134.

born outside the city in which they live." The refugee movement during the last seven years must naturally increase the percentage to a phenomenal extent.[1] Generally speaking it is only economic pressure that induces the rural population to migrate. The peasant's traditions and associations make him prefer to remain in the village rather than in the city, with its slums, absence of sanitary conveniences and scarcity of good food. He is tempted to stay in the city, away from his family, for a period till he gets an opportunity to return to his village. We shall discuss in a later section the effects of such migratory habits on the industrial life of the country.

The extent to which slums have been created in India by the process of urbanisation may be illustrated by the 1931 figures of congestion in Bombay City:—[2]

No. of rooms per tenement	Number of tenements	Percent	Number of occupants	Percent of population	Average per room
1 room .	197,516	81	791,762	74	4.01
2 rooms .	26,231	11	131,872	12	2.51
3 rooms .	7,416	3	44,821	4	2.00
4 rooms .	6,169	2	42,013	4	1.70
5 rooms .	2,953	1	22,302	2	1.50
6 rooms & over .	3,836	2	39,199	4	—

The census of India for 1941 gives us the following figures of housing conditions:

	Persons per 1000 houses 1931	1941
India	4,965	5,116
Provinces	4,998	5,131

The Census Superintendent of Madras wrote in the report of the 1931 census, "A marked feature of Madras is the street-dweller and squatter. A midnight tour of the central and northern parts of the town any fine night would disclose sleeping persons on every side walk. These persons are not all tramps by any means; the majority, indeed, are ordinary citizens in every thing but the possession of a roof. Such a possession has no great inducement for a population of floating labour in a mild and pleasant climate in a city where houses are rare and rents often exorbitant."[3] This is equally true of other big cities. If anything, conditions have become worse in 1951, due to the great increase in city population and lack of adequate house building activities.[4] The combined effects of semi-starvation, over-crowd-

1 Accurate figures regarding refugees are not available but according to Schachtman ("Population Transfers in Asia," 1949) over 11 million were transferred; yet about 35 million Moslems are in India and 53 million Hindus and Sikhs are in Pakistan.

2 No later figures are available.

3 Census of India, 1931, Vol. I, p. 57

4 The Environmental Hygiene Committtee estimated the shortage as 18.4 lakh houses in urban areas in addition to 10 lakh houses for refugees from Pakistan.

ing and lack of sanitation on the health of the people might well be left to imagination.

A one-room tenement in Bombay normally varies from about 10 x 10 feet to about 12 x 15 feet, and the average per room is more than four persons. Each of them has an average of 5 to 7 square feet of floor space. Sometimes 3 or 4 families are huddled together in a single room. By way of contrast, however, we may mention a purely industrial city like Jamshedpur where quarters are built by the Tatas for their employees with proper provision for filtered water and drainage.

The Census Report of 1951 tells us that the total number of occupied houses numbered at the census were 64.4 millions—54.1 million in villages, and 10.3 in towns. This "gives us 6 persons to a house in town" and 5.5 persons to a house in a village. There is no attempt at enumerating in some of the larger cities the number of tenements according to the number of rooms in each. A house in a town may mean a block of 50 tenements or a single tenement. For clarification, the Report, therefore, defines a house with a qualification: "provided that if different parts of the building were structurally separated and provided with separate main entrances so as to give independent access to each part," then each such part was to be numbered as a separate house. The report, then, goes on to distinguish between a house and a household—"a household is a house where people go in and out by the same main entrance, but nevertheless keep separate mess within it." Households are then classified as "small" (with 3 members), "medium" (with 4 to 6 members), "large" (with 7 to 9 members) and "very large" (with 10 or more members). The following table is then supplied:—[1]

Type of Household	**No. of Households Typical Village**	**Typical Town**
Small	33	38
Medium	44	41
Large	17	16
Very large	6	5
Total ..	**100**	**100**

It is a little difficult to understand the value of this classification for comparative purposes. We can only congratulate the Census Commissioner on having elaborated a new technic of classification for social scientists interested in the housing problem in big cities!

It has been said that in a country which is predominantly agricultural, there is a tendency to stagnation and lack of enter-

1 Census of India, 1951, pp. 48-50.

prise, and that a certain measure of industrial life is essential for building up a vigorous national character. At present only 17.3 per cent of the population in India are town dwellers as compared with the U.S.A. which has 67.3 per cent of the total population dwelling in towns in 1950.[1]

Distribdtion on the Basis of Sex

In many parts of Europe there has been an excess of females. In 1950 the number of females per 1000 males was 1052 in Italy, and 1071 in England and Wales in 1951. In the U.S.A. there were, on the other hand, in 1940, 985 females per 1000 males. In India there is an excess of males over females. The following table shows this excess growing from decade to decade.

Year	Males	Females
1901	1000	963
1911	1000	954
1921	1000	945
1931	1000	941
1941	1000	935
1951	1000	947

Proportion of Sexes in States, Females per 1000 males

	1901	1911	1921	1931	1941	1951
Punjab	854	817	828	831	847	863
Madras	1,028	1,030	1,024	1,021	1,009	1,006
Bengal	1,016	—	933	924	890	859
Bombay	964	—	926	929	927	932

The following table gives us a comparative view of sex ratios in a few countries:

	No. of females per 1000 males	
	1880	1939
U.S.A.	965	993
England and Wales	1033	1088
France	1005	1071

Thus whilst the trend in these countries is upward, with a larger number of females per 1000 males, in India the trend is in the opposite direction.

Taking the country as a whole there has been a steady decline in the number of females per 1000 males. The shortage

1 Compare table U. N. Demographic Year Book, 1952, United Nations, p. 11.

	Urban population	Cities of 100,000 and more
India (1951)	17.3	6.8
England and Wales	80.7	51.9
U. S. A	67.3	33.5
Japan	37.5	25.6
U.S.S.R.	32.8	17.1

India in the Year Book ranks No. 60 among 64 countries, the four lower down being Jugoslavia, Ceylon, Haiti and Burma. As the note in the Year Book says: "Urbanisation in the broad sense is a necessary concomitant of industrial development and that the appearance of metropolitan agglomerations is a common and perhaps necessary phenomenon in advanced stages of urbanisation." That high overall density in our country is not accompanied by a large number of metropolitan centres is an indication of our backwardness in industrialisation.

of females, despite slight improvement in 1951, so characteristic of the population of India has given rise to considerable speculation with regard to the causes that can account for it.

(1) There is no doubt that one factor that has to be considered is that of early marriages. Girls of tender age and of a feeble constitution become mothers before they have built up a mature physique. Their constitution is undermined and their vitality impaired by frequent births; and the result is a high rate of female mortality.

(2) Not only are children born in a series of successive years by child-mothers apt to be physically weaklings, but they are apt to be neglected if they are girls, not through any lack of human sympathy, but on account of social customs and attitudes which make parents look upon girls as a burden, whilst sons are looked upon not merely as means of support, but as instrumental to the very perservation of the life and prosperity of the family. A son alone can offer sacrifices to the ancestral gods on whose favours and blessings depend the existence and perpetuation of the family. "Sons are everywhere desired, not only among Hindus where a son is necessary to his father's salvation, but almost equally so among other communities as well; daughters in many parts of India mean great pecuniary expense in providing for their marriage, which, ... among Hindus must be arranged by the time they reach puberty. So strong indeed is the prejudice against the birth of daughters that abortion is reported sometimes to be practised if the child in the womb is foretold to be a girl."[1]

It would also appear that in every State the number of female births is smaller than the number of male births. Whilst there has been an increasing pressure of population under present conditions the decline in the number of female births may in the long run involve a declining population. The declining proportion of females to males which has been a feature characterizing the few decades for which census figures are available might also suggest a trend towards lower national vitality, which can only be explained in terms of malnutrition and general poverty.

(3) It has also been alleged that in some cases women die of overwork. It is not unusual to see in our country a woman big with child working till the last day, sometimes till the last hour before delivery; after delivery the woman becomes a physical wreck, if she survives. In many cases for lack of proper

1 Census Report. 1931. Vol. I, Part I, p. 195.

medical advice and treatment before and after delivery she may not survive at all.

(4) There is no evidence to justify the assumption of widespread female infanticide. In a few cases the practice still prevails. The Jammu and Kashmir State as late as 1930 had to take measures to suppress infanticide in certain Rajput villages. There are tribes and clans of Rajputs in Jaipur and Gwalior States amongst whom the ratio of females to males is between 500 and 600 females per 1000 males. The Census Superintendent of Rajputana observed in the 1931 report: "Deliberate infanticide seldom comes to light, but there is no doubt that unwanted female infants are often so neglected that death is the result."[1]

The Census Commissioner, 1951, discussing the question of female deficiency in India has a naively simple way of explaining the phenomenon: (1) Males and females are not born in equal numbers. (2) They do not die in equal numbers either in infancy and childhood or in old age or in any particular age group, or at all ages taken together. There is a definite excess of male births over female births. Nature having given rise to inequality, then appears to set about redressing it. Male infants die in larger numbers than female infants before completing the first year of life. But the proportions go on continually altering from year to year as people grow older. There is no uniform rule governing this inequality at all places and times. The Commissioner ends by stating that though "some satisfactory explanation of the facts has been propounded by scientists, the present writer has not come across any such explanation."[2]

Sex Ratio and Community

The shortage of females is not confined to Hindus. It is, in the first place, to be noticed that early marriages are common to Moslems and Hindus and to a smaller extent are found even amongst Sikhs and Christians as evidenced by the following table:—

1 Quoted in Census Report, 1931, Vol. I, Part I, p. 196. cf. "Female infanticide does exist in parts of this vast country, but it is of insignificant proportions, hardly important to influence the general sex ratio. It does not explain the increasing margin between the numbers of the two sexes from census to census. Finally it is difficult to reconcile this explanation with the fact that we have actually an excess of girls over boys in all ages from 1 to 4. And since more boys than girls are usually born in every society—the ratio is normally from 105 to 108 boys per 100 girls born—we cannot have an excess of females in the first years of life, if female infants are being choked off in large numbers!" D. Ghosh "Pressure of Population and Economic Efficiency in India" (1946) pp. 6-7.

2 Census of India, 1951, pp. 59-62.

Marriage under 15 per 1000 of total married persons

		Females	Males
India	..	157.3	65.7
Hindus	..	164.1	73.1
Moslems	..	174.3	59.4
Sikhs	..	74.6	26.9
Christians	..	43.3	15.4

The following table illustrates the same tendency:—

Number of unmarried girls in percentage of different age groups

Hindus		Moslems	
Age	Percentage	Age	Percentage
0- 5	98.5	0- 5	99.3
5-10	88.3	5-10	94.7
10-15	54.3	10-15	64.4
15-20	13.8	—	—

It has been suggested that some proportion of the excess number of males both among Moslems and Brahmins or other class Hindus may be due to the purdah system, which prevents the enumerator from having access to the house, and induces him to put down as females those who are not personally known to him. The all-India ratio of females per 1000 males is 782 amongst Sikhs, 901 amongst Moslems and 951 amongst Hindus. Within the Hindu community, the ratio increases in inverse proportion to social position and education. Thus in Bombay Presidency in 1931 the Hindu population was divided up according to education and status into advanced, intermediate, backward and depressed classes. For the advanced castes the ratio of females to males was 878 per 1000, for the intermediate castes it was 935, for the aboriginal tribes 956, while for the depressed classes it was 982 per 1000 males.

In the whole of Europe more males are born from year to year than females. This would lead to an excess of males; but in most countries there is a greater mortality among men than women, and this is sufficiently great to wipe out the excess of male births. The greater mortality among males may be due to the dangers of their occupations in the defence services as well as in mines and factories. It may also be due to vice and crime. In Europe, we have another cause, powerfully affecting the relative proportion of the sexes in the shape of migration. It is pointed out that 60 per cent of the emigrants to the U.S.A. from Europe are males. In the U.S.A. the relative number of females per 1000 males declined from 978 in 1870 to 952 in 1890. After the introduction of the quota system when the number of immigrants was restricted, the ratio between the sexes has been corrected, there

being 102 males for every 100 females. Now there is an excess of females over males.

Sex Ratio in Cities

For India as a whole in 1951, whereas in rural areas there were 966 females per 1000 males, in urban areas the number of females to every 1000 males was only 860. The following table shows the relative number of females per 1000 males in the urban areas of different States in 1951—

State	Females per 1000 males total population[1]	Females per 1000 males urban population[2]
Madras	1,006	993
Bihar	989	820
Madhya Pradesh	993	886
Bengal	859	601
Uttar Pradesh	910	805
Bombay	932	773
Assam	879	577
Punjab	863	699
Orissa	1,022	—

These figures are to be accounted for in the light of the common practice in India which makes men leave their families in their village homes and work for their living in towns. A table which we reproduce below from the Census Report of 1931 shows that in the cities the number of married females per 1000 married males is even smaller than the number of females as compared with males:—

Eight Large Cities	Females per 1000 males 1931	1951[3]	Married females per 1000 married males[4]
Calcutta	468	570	365
Bombay	554	657	499
Madras	897	921	936
Hyderabad	836	989	822
Delhi	694	770	754
Howrah	550	616	447
Benares	792	811	796
Nagpur	848	919	838

In Europe, on the other hand, there is commonly an excess of females in large cities. In the period between the ages of 10 and 20 the girls migrate to the towns as domestic servants. In the period of age beyond 50 men again migrate from the towns back to the country. It may also be that men become incapacitated for work earlier than women.

1 Calculated from Census Paper No. 1, 1952.
2 These figures are for 1931. No figures are available for 1951.
3 These figures are calculated from Census Paper No. 1 of 1952.
4 These figures are for 1931. No later Statistics are yet published.

Age Composition

Classification of the population by age has considerable interest from a sociological point of view. According to Sundbarg, a normal population has about one half of its total between the ages of 15 and 50, and the proportion of those above that age group to those below it indicates whether the population is increasing, stationary or decreasing. The youngest of the three population groups must be double the eldest if the population is to continue to grow. The census report for 1931 gives us the following table showing the population of the different provinces in order to make out that all of them are clearly progressive according to Sundbarg's classification:—

Province	Percentage of population aged 0-15	15-50	50 and over
Assam	42.2	49.8	8.0
Bengal	40.8	51.1	8.1
Bihar and Orissa	40.2	50.2	9.6
Bombay	39.7	51.2	9.1
C. P. and Berar	40.1	50.0	9.9
Madras	38.9	50.5	10.6
Punjab	41.2	48.1	10.7
U. P.	38.9	51.3	9.8
India	**39.9**	**50.5**	**9.6**

The Census Report admits that Sundbarg's categories need readjustment before they can be satisfactorily applied to Indian conditions. Moreover, the Indian age returns are admitted to be extremely inaccurate. The 1931 report quotes the Madras Census Superintendent: "A Salem father, challenged about the absence from his account of persons present of any indication of a very recent arrival said with some surprise 'It is but now born!' Do you count it?" Moreover, the age period of girls from 10 to 15 is defective in numbers, due partly to the unwillingness of higher caste Hindus to admit unmarried daughters already pubescent. In some parts of India girls are secluded at the age of puberty or shut up and concealed. Another reason for the misstatement of the correct age is a superstitious belief that it is unwise to state one's age correctly, as it is liable to reduce one's span of life.

What is, however, more important, as a consideration which renders Sundbarg's categories inapplicable to a country like India is that the working age of the population in India is not the age between 15 and 50 but the age between 15 and 40. This was admitted in the Census Report of 1911 which says: "I have taken 15 to 40 instead of 15 to 50 as Sundbarg has done, partly because old age comes on quicker in India and partly because

they correspond more closely to the reproductive period of life." Taking the distribution of population on this basis, we obtain the following age composition in percentage for 1931 and 1938:—[1]

Age	1931	1938
0-14	39.9	39.8
15-39	41.0	41.2
40 and over ..	19.1	19.0

It will thus appear that the working population, both male and female, in India, that is, the population between the ages of 15 and 40 is 41 per cent of the total population. It has to be remembered that a considerable proportion of the females belonging to the higher castes amongst the Hindus, as well as those under purdah, both Hindus and Moslems are precluded by the customs and institutions of the country from contributing to the production of wealth, except in so far as they perform services as mothers and as housewives. At the most favourable estimate it would seem that the burden of supporting the entire population falls upon 30 per cent of the population.

The Census of 1951 gives us the age composition on an altered basis of classification, continuing a tradition established by previous reports; and as the detailed tables are not yet available it is difficult to obtain a comparative view of changes in the age composition over the last few decades. Following the new classification we find that 38 per cent of the total population are below 15 years, 45 per cent are between the ages of 15 and 44 and the remaining 17 per cent are above 44. Commenting on this issue, the Census Commissioner observes: "Out of every 1000 persons there are 271 people under age 15 in America, and there are 383 in India. This means—even if an average Indian married couple had the same resources to spend on bringing up their children as an average American married couple, each Indian child can only get a much smaller share of these resources than each American child....Actually the resources available to an average Indian married couple are very much smaller—which makes the disparity in the number to be looked after all the more serious....In terms of food, shelter, care and attention during illness, education and every kind of preparation for life, the Indian child is handicapped unmistakably and of necessity."[2]

The U. N. Publication on the Determinants of Population Trends observes: "Paradoxically, one of the chief obstacles to economic development is the manpower shortage which exists

1 The figures for 1938 are obtained from the estimates supplied in the Statistical Year Book of the League of Nations for 1940-41. No later figures are available.

2 Census of India, 1951, p. 66.

even in the so-called overpopulated countries...Owing to the age structure of the population there are not enough adults."[1] Because of social customs only a small proportion of the adults is available for employment which would contribute to economic development. The load of dependency arising from the unfavourable age structure of the population is illustrated in a footnote of the U. N. Publication. "For example, let it be assumed that the scale of needs is in the following proportions: child, one third, aged man or woman, one half, and adult of production age, one. Then in the population of an under-developed country consisting of 42 per cent children, 55 per cent adults of productive age, and 3 per cent aged persons, there is a ratio of 128 consumer equivalents per hundred adults of productive age. In the population of an advanced country, with 23, 67, and 10 per cent respectively in the three age groups the corresponding ratio is 119 per hundred." This note, however, does not take into account the fact that social customs prevent a considerable portion of adults who belong to the female sex from contributing to the productive life of a country like India.

Taking the working age in Western countries as that between 15 and 60, the working population of the U.S.A. was 64.5 of the total in 1940. We reproduce below the figures for a number of countries showing the population in three age groups:

Age Group	U.S.A.	Germany	France	England & Wales	Sweden	Italy	Canada	India
	1950	1950	1950	1950	1950	1950	1938[2]	1931[2]
0-15	27.1	21.6	21.7	22.7	23	26.4	27.7	39.8
16-60	60.8	61.3	61.8	62.5	62.3	61.4	62.8	50.6
60 & over	12.1	17.1	16.5	14.8	14.7	12.2	9.5	9.6

Relatively the burden of maintaining the young and the old in India falls upon a smaller portion of the population than in the countries that we have noted. Not only this—there is an enormous wastage of life in India as will be evident from the following table showing the comparative size of the population in percentage in different countries in the age groups, 0-15, 15-50, and 50 and over:—

Age Group	India	U.S.A.	Germany	France	England & Wales	Sweden	Italy	Canada
0-15	39.8	25.1	21.7	23.7	21.8	20.8	30.6	27.7
15-50	50.6	54.6	55.5	50.2	53.6	55.0	49.6	53.2
50 and over	9.6	20.3	22.8	26.1	24.6	24.2	19.8	19.1

The difference in the age group 0-15 which marks India from all other countries noted becomes evident. Looking to the enor-

1 p. 265.

2 Later figures for Canada and India are not available. The figures for Germany are the combined figures of East and West Germany.

mously large proportion of the younger generation or first age group, we should expect a very high death rate in the group to bring down the second age group to the 50 per cent average of Sundbarg. This is further borne out by the fact that the death rate for the age group 0-15 was 33 per 1000 in 1938 as compared with 12 per 1000 for the age group 15-50.

Mortality Rates per 1000[1]

Age	Australia 1945	England 1950	Germany 1937	Sweden 1948	U.S.A. 1949	India 1901-10
			Males			
0	33.5	1.4	21	26.2	38.4	289.9
5	2.3	33.8		1.5	1.6	27.5
10	1.1	0.7	2	.8	.8	12.5
15	1.0	.6	1.4	.6	.8	13.2
			Females			
0	26.4	25.7	16.6	20.1	29.6	284.6
5	1.9	1.3		1.1	1.4	26.2
10	.8	.5	1.8	.4	.5	12.9
15	.7	.4	1.2	.5	.5	13.4

It will thus be seen that the infant mortality rate, that is, of those infants who died during the first year of their life, is conspicuously higher in India as compared with other countries referred to in the table. The infant mortality rate in India after 1910 shows a decline. It was 180 per thousand in 1930, 160 in 1940 and 127 in 1950. The rate of infant mortality in the cities still remains alarmingly high. Thus in 1940 the mortality rate in Bombay was 213 per thousand, in Calcutta 214, in Lucknow 295 and in Nagpur 211. The causes of this high mortality rate in cities include immature maternity, the purdah system and the primitive obstetrics. The enormous waste of life in India may also be illustrated by reference to the expectation of life at different ages in our country.

"The average length of life in India is low as compared with that in most of the Western countries;[2] according to the Census of 1921, the average for males and females was respectively 24.8 and 24.7 years, or a general average of 24.75 years in India as compared with 55.6 years in England and Wales. It was found to have decreased further in 1931, being 23.2 and 22.8 years for males and females respectively."[3] Our vital statistics are gravely inaccurate; still in comparison with England and Wales where the expectation of life has increased from 45.4 in 1881-91 to 60.8

1 U. N. Demographic Year Book for 1952.. No later figures for India are available. We have to fall back upon the Census Report for 1931.

2 The expectation of life at age 10 is 60 years in Australia, in England and Wales, and 50 in Japan, as compared to 39 years in India.

3 "Industrial Labour in India," Geneva Report, 1938, p. 8.

in 1933, our position shows improvement from 27 years in 1921-30 to 32 years in 1941-50.[1]

The following table gives us the expectation of life at birth and at different ages for males and females for India and England:—

	India				England			
Age	Males		Females		Males		Females	
	1901	1911	1901	1911	1901	1911	1901	1911
0 ..	23.63	22.59	23.96	23.31	44.07	46.04	47.70	50.02
10 ..	37.74	33.36	33.86	33.74	49.65	52.35	51.98	55.02
20 ..	28.59	27.46	28.64	27.96	41.04	43.67	43.45	46.36
30 ..	22.90	22.45	23.82	22.99	33.06	35.29	35.43	37.84
40 ..	17.91	18.10	19.12	18.49	22.65	27.27	27.01	29.65
50 ..	13.59	13.97	14.50	14.28	18.89	19.85	20.63	21.87

The Census Report for 1931 gives us the following corresponding tables for males and females in India:—

Life Table 1931

Age	Males	Females
0	26.91	26.56
10	36.38	33.61
20	28.67	27.08
30	23.60	22.30
40	18.60	18.23
50	14.31	14.65

In spite of some improvement as indicated by the figures for 1941-50, it can safely be asserted that there is a tremendous loss of economic power in the country owing to the shorter duration of life. From an economic point of view, we might speak of a progressive decrease in the wealth of the country due to the fact that people who consume wealth in the early years of life are prevented by early death from contributing to the increase in wealth production, which they might have made, if they had been favoured with a longer lease of life. Thus we have a one-sided age distribution, all the more regrettable as it is not an inevitable product of geographical or climatic conditions, but is largely the result of modifiable social and economic influences.

One more point of importance connected with age distribution is the heavier mortality of females as compared with males between the ages of 12 and 45; that is, between the age of adolescence and the age when capacity for child bearing normally ceases. This has a direct bearing on the net reproduction rate of our population, which is obtained by determining the number

1 "In the U.S.A. nine out of ten new born White females can expect to live to the age of 50, the end of the child bearing period. In India the corresponding proportion is two out of ten." Conference on World Population Problems, Oct. 1951, New York Academy of Sciences Annals, Vol. 54, p. 747.

of female children born to each woman to replace the mother. This rate takes into consideration the possibility of the female child living through the period of child bearing.

In India the average number of children born to a woman is not large. The Census of 1931 gives the results of a special enquiry into 900,000 families scattered among all classes and in different parts of India. The enquiry showed that an average married woman has 4 children born alive, and that 2 in every 4 children survive. This relatively small number is not due to the adoption of birth-control practices or to late marriages. It is the result of the fact that a large number of women die before they reach the end of the reproductive period. Premature death in the case of married women has been attributed to the practice of early marriages, and the abolition of child marriages would undoubtedly increase the birth rate. It may also be noticed that the prohibition of widow remarriage is also a factor that accounts for the low fertility. In 1931, it was pointed out that there were 26 million widows in India or 15 per 1000 of the population, as compared with 7 per 1000 in Europe .

It will thus appear that social reform in India, whether it takes the form of the recognition of the legality of widow remarriages, or the abolition of child marriages, or the raising of the age at marriage, or the spread of the knowledge of hygiene, or better provision for medical relief, especially in maternity cases will directly affect the birth rate and contribute to a more rapid increase in our numbers. It would be absurd, however, to forecast the population trend in the future in our country, on the assumption that the present rate of our increase will be aggravated by measures of social reform. For nature and human devices will provide corrective factors which will keep down the rate of growth. In other countries where the level of education is high, the growth of population has been subjected to a voluntary limitation which substantially restricts the size of the family. In India, on the other hand, there has been a policy of drift, resting on the faith implied in the proverb, "With every mouth God sends a pair of hands" with the result, as we have already seen, that a high birth rate has brought in its wake a correspondingly high death rate.

Occupational Distribution

The statistics bearing on the occupational distribution of the population are of value as throwing light on social conditions and changes. They are an excellent index of the stage of industrial development of a country. The census figures should be the most

important source of our information on this subject; but, as things stand, comparisons based on the figures supplied by the censuses in our country are apt to be misleading, because of the changes that have been introduced during successive census enumerations, in the character of the information collected and in the manner of collecting it. The most radical of these changes was that introduced in 1931, which for the first time made a distinction between working and non-working dependants. A non-working dependant or a dependant pure and simple was defined as one whose earnings were too insignificant as compared with the requirements of the family. The Census Superintendent of the Central Provinces pointed out, "The distinction between workers and dependants, however clear to the trained intelligence, is very liable to be misunderstood by the average enumerator and requires much explanation. Even when an enumerator has mastered the definitions, it is often a problem for him to extract from the villagers the information needed to ensure accuracy of the record; and obviously there are dangers of mistakes occurring in the records prepared by the less zealous census officials."

The following table gives us a comparative view of the changes in the occupational distribution of the Indian population from 1901 to 1921:—

	1901		1911		1921	
	Population in millions	Percentage	Population in millions	Percentage	Population in millions	Percentage
A. Production of raw materials .	192	67.4	221	72.7	231	73.1
B. Preparation and supply of materials	56	19.7	56	18.4	56	17.7
C. Public administration and liberal arts	10	3.5	10	3.3	10	3.2
D. Miscellaneous .	27	9.4	17	5.6	19	6.0

The figures for 1931 do not give us any direct indication of the distribution of the total population according to its dependence on various occupations. Instead we get the following table for the four classes:—

	Number of workers in millions	Percentage of workers	Number of non-working dependants in millions	Total maintained in millions	Percentage of total population in millions
A .	103.6	67.3	131.7	235.3	67.1
B .	25.6	16.6	32.7	58.5	16.6
C .	4.1	2.8	6.3	10.4	3.0
D .	20.5	13.3	26.1	46.6	13.3

We cannot compare these figures with the corresponding figures of the three earlier censuses as the very basis of the classi-

fication has been fundamentally altered. We have no figures available under this head for the Census of 1941. As regards the 1951 census the classification has been again altered, making it impossible to obtain a comparative view of occupational trends and shifts in the relation between earners and dependants in different occupations.

Pasture and Agriculture

The following table shows the number of persons occupied as principal workers in pasture and agriculture:—[1]

	1911 (ooo's)	1921 (ooo's)	1931 (ooo's)
Pasture and Agriculture ..	106,538	106,394	104,147

It will be noticed that there has been no substantial change in the total number of persons following pasture and agriculture as a principal occupation. But the lack of increase is to be attributed to the changes in classification in 1931 which show under the head "domestic service" an extraordinary increase from 2.5 million occupied persons in 1921 to 3.9 million in 1931[2] There is an equally abnormal increase under the head "insufficiently described occupations". In 1921 the total number of occupied persons was 6 millions. In 1931 it stood at 7.8 millions. We cannot resist the conclusion that if the system of classification adopted in the earlier censuses had been followed, the number of the population not only of workers but including dependants in 1931, so far as agriculture is concerned, would have been 75 per cent of the total population if not more. Thus the percentage of population dependent on agriculture has been increasing as shown below:

1891	1901	1911	1921	1931
61.1	65.5	72.2	73.0	75

The following table shows the proportion of actual workers of all ages to the population between the ages of 15 and 60 and of 10 and 60 years:—[3]

	1911	1921	1931
Total number of actual workers (in millions)	148.9	146.4	146.9
Total population between the ages of 15 and 60 (in millions) ..	176.6	175.5	195.8
Proportion of actual workers per 1000 of population between the ages of 15 and 60	843	834	749

1 B. G. Ghate, "Changes in the Occupational Distribution of Population" 1940, No. 1 of 'Studies in Indian Economics' issued by the Office of the Economic Adviser to the Government of India.

2 Cf. "The apparent decline in the numbers dependent upon agricultural and pastoral pursuits between 1921 and 1931 is illusory......to be accounted for by a change in classification, not of occupation." Vera Anstey, "Economic Development of India," p. 61.

3 Ghate, loc. cit.

	1911	1921	1931
Total population between the ages of 10 and 60 (in millions) ..	211.8	214.7	238.5
Proportion of actual workers per 1000 of population between the ages of 10 and 60	703	682	616

It would thus appear that the proportion of workers per 1,000 of the population capable of doing work has been falling during each successive census. Whereas the proportion of all workers of all ages per 1000 of the population between the ages of 10 and 60 and 15 and 60 was 703 and 843 respectively, in 1911, it fell to 616 and 749 respectively in 1931.

The Census figures of occupational distribution in 1951 as given in Census of India, Paper I, change the classes and nomenclature once again, as the table reproduced below indicates:

			In Millions	Percentage of total population
I	Cultivators of land wholly or mainly owned and their dependants	M.	85	46.8
		F.	82	
	Total		167	
II	Cultivators of land wholly or mainly unowned and their dependants	M.	16	9.0
		F.	15	
	Total		31	
III	Cultivating Labourers and their dependants	M.	22.3	12.6
		F.	22.4	
	Total		44.7	
IV	Non-cultivating owners of land—agricultural rent receivers and their dependants	M.	2.4	1.4
		F.	2.8	
	Total		5.2	
V	Production other than cultivation ..	M.	20	10.6
		F.	17	
	Total		37	
VI	Commerce	M.	11	5.9
		F.	10	
	Total		21	
VII	Transport	M.	3.1	1.7
		F.	2.5	
	Total		5.6	
VIII	Other services and Miscellaneous Sources	M.	22.6	12.0
		F.	20.3	
	Total		**42.9**	**100.0**

The percentage of the total population dependent on agriculture is nearly 70, assuming that none of the people included in class VIII had anything to do with the land. But the alarming feature in this classification is the number of people shown under class V. We believe a number of people shown under this class may be employed in mining. But even taking the numbers as a whole the 10.6 per cent of the population in Class V include factory workers as well as those employed in hand

industries and cottage industries. The total in millions is 37. They obviously include dependants. If this supposition is correct, it is difficult to reconcile this figure of 37 million with the corresponding figure for 1931 which is 34.2 as the total population dependent on industries. Is it to be inferred that in twenty years the number of people dependent on industries has increased by 2.8 million, in spite of intensive efforts at industrialisation? As the number employed in large-scale or factory industries has increased, those employed in handicrafts and cottage industries must have declined. Either this inference is correct or the different nomenclatures adopted in 1931 and 1951 are unfortunately so devised as to make any inferences impossible. What shall we think, moreover, of the ability and intelligence of our census enumerators if they are unable to give the detailed occupation of nearly 43 million people or 12% of the total population? Moreover, what shall we think of a classification like No. VIII which includes in "other services" the Liberal Arts and Professions, Government Services, Central and State, and domestic servants? Now that we are active members as a nation in the U.N.O. and all its associated bodies, is it too much to expect that the Government of India should adopt a common classification in its demographic returns, so that students may find it easy to take a comparative view of Indian returns and the returns of other countries?

The following table shows the average daily number of persons employed in factories under the Factories Act:—

Year	1911-14	1924	1934	1937	1939	1951
Numbers (in 000's)	909	1,456	1,497	1,676	1,751	2,537

The following table shows the total number of workers occupied in industries (in 000's):—[1]

	1911	1921	1931	Percentage variation
Textiles	4,449	4,031	4,102	+ 1.8
Wood	1,731	1,581	1,632	+ 3.2
Metals and Ceramics	1,896	1,811	1,738	— 5 0
Food industries	2,134	1,653	1,478	—10.7
Industries of dress & toilet	3,748	3,404	3,381	— 0.7
Furniture industries	18	12	21	+50.1
Building industries	962	812	619	—23.8
Construction of mines	25	23	29	+27.4
Production and transmission of physical force	7	11	24	+117.0

In view of the figures supplied in the above tables it is absurd to suggest that the pressure on the soil has not been

1 Ghate, op. cit. p. 26.

increasing continuously during the past few years. The fall in the number of workers occupied in industry is a fall of nearly 2 million of workers between 1911 and 1931.[1] Counting three dependants to every worker it would appear that 6.7 million people who were in 1921 dependent on the handicrafts were thrown back on the soil by 1931. There is nothing in the trend of the occupational distribution of our population in the decades between 1881 and 1931 to show a corrective process counteracting the predominantly agricultural and unbalanced economic life of India. The trend to "progressive ruralisation" often complained of has not been reversed. The increase in the number of workers employed in the organised mechanical industries, which has taken place during the last few years, plays a very insignificant part in view of the total volume of our working population. On the whole, therefore, these figures do reflect the lopsided character of our economy with too much dependence on agriculture. The gravity of the increasing population pressure on the soil is indicated by the following table which shows the relative proportion of industrial employment during the last few decades:—[2]

	1911	1921	1931	1941	Percentage variation 1911-41
Population (in millions) ..	315	319	353	389	+23.5
Working population (in millions)	149	146	154	170[3]	+13.4
Persons employed in industries (in millions)	17.5	15.7	15.3	16.3[3]	— 6.3
Percentage of workers in industries to the working population ..	11.0	11.0	10.0	9.6	—12.7
Percentage of Industrial workers to the total population	5.5	4.9	4.3	4.2	—23.6

The decline in the percentage of workers in industries to the working population, in spite of some progress in industrialisation, is a clear indication of the fact that quite a good number of workers in cottage industries are being squeezed out. The greatest sufferers are hand loom weavers. The increasing population is not being absorbed in industries; on the other hand, a proportion of those dependent on industries in the past are falling back on land. In a large number of industries, the decline in numbers involves a further overcrowding in agriculture which in turn brings poverty and indebtedness in an aggravated form. Between 1911 and 1941 the total population increased by 74 millions. Even with an addition of a million workers in the

1 This is an eloquent commentary on the industrialisation of our country under British Rule in the past.

2 R. Mukerjee, op. cit. p. 204.

3 Estimated.

organised industries, the total number of workers would not exceed 17 millions. On the other hand, the working population must have increased by 16 to 18 millions.

In Bombay Province between 1921 and 1931, while there was a 7 per cent increase in the number of persons employed in agriculture, industry showed a decrease of 5 per cent in the number employed. In Bengal, the decrease in the number of, workers in industries is indicated by the following table:—[1]

	1911	1921	1931	Percentage variation 1911-31
Population (in millions) ..	46.3	47.5	51.8	+10.0
Working population (in millions)	16.2	16.8	14.7	— 0.9
Number of workers in industries (in millions)	1.7	1.7	1.3	— 0.23
Percentage of workers in industries to the working population	10.5	10.1	9.0	—14.2
Percentage of industrial workers to the total population ..	3.9	3.7	2.5	—35.8

This great and increasing lack of an occupationally balanced population has to be faced not by an easy optimism. Any increase in large-scale production is not likely to absorb even the annual increase in the working population by the growth of numbers. The total number of people employed in large-scale establishments in India was less than 2 millions in 1939 and would be about 3 million at present. If the population goes on increasing at the present rate, that is, about 4 to 5 millions per year, what a colossal task it would be to absorb the surplus into industry even if we plan for rapid industrialisation! Still less will such industrial production absorb the present surplus agricultural population. The balance cannot be restored except by developing a large number of small-scale and medium-scale industries. Such economic reconstruction cannot mean a mere blind copy of Western industrialism. It means the visualisation of a new economic order in which we have variegated production through units considered perhaps too small in the industrially advanced countries, but which wil be nearer the 'optimum' size in our country in view of the relative abundance of labour and the relative scarcity of capital. Moreover, such a reconstruction would involve a planning of the geographical distribution of industries so that they go to the village and the small town rather than get concentrated in a few cities. If such economic reconstruction is planned in the light of a social vision which will release our energies into a fresh life, freeing them

1 R. Mukerjee, op. cit. p. 207

from the ignorance and the poverty and the diseases which have hitherto subdued them into apathy and listlessness, we might well look forward to a happier and a richer life for our people.

CHAPTER VII

THE HUMAN FACTOR—(Continued)

The Quality of the Population—Infirmities

The social condition of a community can be judged positively by the standard of life to which they are habituated and negatively by statistics relating to infirmities of body and statistics of suicide, vice and crime. In every country, there is a certain number of persons, who are not able-bodied, on account of some physical or mental infirmity. They are a burden on society. Their presence is an economic loss and indicates in the last analysis some defect in the social organism; poverty, crime, vice, disease are all symptoms of a diseased body politic. It is necessary to consider data connected with these defectives, for ascertaining the causes that are responsible for them.

There are many classes of infirmities. Some of them entirely incapacitate the individual: others only partly. Some are present from birth; others come on with advancing age. Some people are totally blind; others have only weak eyes. Some are only deaf; others are deaf-mutes. A number of these infirmities are simply the accompaniments of advancing age. There are others such as loss of arm or leg, which while they interfere with the individual's full capacity for work, do not prevent him from contributing his limited share to production. Even in civilised countries it is difficult to record all cases of partial disability.

As regards India, the returns of infirmities have never been satisfactory. The Census Report for 1931 says that feeble-minded persons are returned as insane, and many who are partially blind are returned as totally blind. "In the case of leprosy it is practically certain that the Census figures in India fail entirely to represent the true state of affairs."[1] Diseases like leprosy and insanity are likely to be concealed; different individuals may attach different meanings to insanity. It is significant that the Blind Relief Association found by a count that the totally blind in Bijapur District in 1920 numbered 260 per 100,000 as against 70 returned at the Census of 1911.

1 Census Report, 1931, p. 253.

The following tables give us statistics about four principal infirmities in India:—

	Number afflicted					
Infirmity	**1881**	**1891**	**1901**	**1911**	**1921**	**1931**
Insanity	81,132	74,279	66,025	81,006	88,305	120,304
Deaf-muteness	197,215	196,861	153,168	199,891	189,644	230,895
Blindness	526,748	458,868	354,104	443,653	479,637	601,370
Leprosy	130,968	126,244	97,340	109,004	102,513	147,911
	Number afflicted per 100,000 of population					
Insanity	35	27	23	26	28	34
Deaf-muteness	86	75	52	64	60	66
Blindness	229	167	121	142	152	172
Leprosy	57	46	33	35	32	42
Total	**407**	**315**	**229**	**267**	**272**	**314**[1]

The decrease from 1881 to 1901 was attributed partly to increasing accuracy of enumeration and partly to severe famine mortality. The increase in 1931 has been attributed to the increasing survival of the unfit resulting from increasing care and alleviating measures.

Insanity and Deaf-Muteness

The social consequences of mental disorders have great significance. It is pointed out that more than one-half of the 438,000 hospital beds in the U.S.A. were filled by victims of mental disorders. It is also significant that the incidence of the disease does not differ as between Negroes and Whites in the U.S.A. The number of insane persons in 1931 in India is recorded as 34 per 100,000 of the population. The difficulty of procuring accurate insanity returns is illustrated by the different views entertained on the nature of insanity by Census Superintendents themselves. One Superintendent says, "Idiocy is a congenital defect and one would have expected a much higher proportion of insane in the earlier age periods." Another condemns his returns for showing just such an increase on the ground that "Complete insanity manifests itself at adolescence; and returns to be accurate must exclude the congenitally weak-minded." The total number of patients in mental hospitals in 1930 was 11,147, in other words, even less than ten per cent of the reported total of insanes in India. The estimated number of insanes about 1940 was placed at a million.

Deaf-muteness in India is frequently associated with goitre and cretinism, and has been attributed partly to the absence of iodine salts in the soil. The geographical distribution of deaf-muteness brings out to some extent the connection between this

1 Excludes multiple infirmities.

infirmity and locality. The highest proportion of deaf-mutes for 1931 was 159 per 100,000 in Jammu and Kashmir, and 149 in Sikkim.

Blindness

No practical and uniform definition of blindness has been worked out so far. Several ready-to-hand definitions have been suggested, such as inability to count upon the hand at a distance of 12 inches, or to recognise a human face. In the U.S.A. the total blind population in 1920 was computed at 74,500. The Census Superintendent of Madras says in the Report for 1931, "The chief tragedy of blindness is that so much of it in India (probably more than half) is preventable, and that the majority of incurably or partially blind become so when infants or young children. We are apt to dwell too much on cataract and forget the large share which parental folly and neglect, improper food and housing play in producing the 50,000 blind recorded in this presidency. Blindness from cataract is of less importance, is associated with years and is curable. .... Ophthalmia Neonatorum, syphilis, small-pox, keratomalacia, on the other hand, as causes of blindness, all mark their victims before adult years are reached."[1] In Western countries. it has been recognised that the one desirable means of affording financial help to the blind, who cannot support themselves, is through some plan of social insurance by which compensation is granted on the occasion of the loss of sight. In the U.S.A. this principle is embodied in Workmen's Compensation Acts.[2]

Leprosy

"It has been estimated that there are no less than five million cases of leprosy in the world, and it is probably correct to say that of that number approximately one million are to be found in India."[3] "The Census figures should be multiplied seven or eight times in order to arrive at a reasonable estimate and the figure of one million is not likely to give an exaggerated picture of the actual position."[4]

Leprosy in India is a disease in which concealment is easy and likely to be obstinate. Concealment, particularly in the case of women, is easy under the purdah system. The Census Superintendent of Bihar and Orissa writes in 1931, "Doubtless men are more liable to develop this disease than women are,

1 Census Report for 1931, p. 261.

2 The Blindness Committee of the Central Advisory Board of Health estimate 2,000,000 blind in 1947.

3 Public Health Commissioner's Report for 1936, p. 74.

4 *Ibid,* p. 75.

but the extent to which this is true bears no relation to the disproportion exhibited by the Census figures which can only be due to systematic concealment."

Deficiency Diseases

While discussing the positive checks in an early chapter, we have pointed out the heavy toll of life due to cholera, plague, influenza, and malaria. We have also given comparative figures of mortality rates for certain diseases. All these diseases affect the vitality of the people and the quality of the population. About 50 per cent of deaths are classified as due to "fever"—a very vague term. Many of these are the results of malnutrition and semi-starvation, and so are "deficiency diseases."[1] It may be noted that cholera, smallpox, plague, fevers, tuberculosis, dysentery and diarrhoea, etc., may be considered to fall under the heading "diseases of poverty," and most of them are preventable. If the quality of our population is not what it ought to be, due to these diseases, it should be attributed to the lack of adequate preventable measures and malnutrition. A properly planned society which aims at removing evils of inadequate and unwholesome food would certainly improve the quality of the stock.

Literacy

The importance of education even from a purely economic point of view has become a commonplace. It is a pre-requisite, not only of economic progress, but of that larger and fuller life which we regard as our common human heritage.

For the purposes of Census, literacy has been defined as the ability to write a letter and read the answer to it. In 1881, the total number of literates was 46 per 1000 in the whole of India. In 1921, the proportion rose to 71 per 1000. In 1931, it was 80 per 1000 which has arisen to 121 in 1941. Taking the figure of literates for persons aged 5 and over we obtain the following table:—

Literates per 1000 aged 5 and over

	1921	1931
Males	139	156
Females	21	29
Persons	82	95

The following table indicates the literacy per 1000 aged five and over in different communities, according to 1931 Census:[2]

1 See Chapter on "Problems of Consumption" for a discussion of malnutrition and deficiency diseases.

2 P. 328. Figures for later years are not available.

Community	Total	Males	Females
All India	83	138	23
Parsis	791	845	734
Jews	416	488	338
Jains	353	582	106
Christians	279	352	203
Sikhs	91	138	29
Hindus	84	144	21
Muslims	64	107	15

Taking the comparative figures for 1921 and 1931 by communities, it appears that whilst other communities show progress, there was a decline in the literacy of the Parsi community by 3 per cent in ten years and in the Christian community by 6 per cent. The Census Report attributes it to economic depression so far as the Parsis are concerned. As regards Christians, it is attributed to the inclusion of illiterate converts.

Literacy in English increased among all communities in the period 1921-31 except among the Christians, where it failed to keep pace with the growth in numbers. The following table gives us the literacy in English in different communities in 1931:—[1]

	Number per 10,000 aged 5 and over literate in English		
Community	Persons	Males	Females
All India	123	212	27
Hindu	113	204	16
Sikh	151	251	21
Jain	306	571	20
Buddhist	119	207	26
Zoroastrian	5,041	6,396	3.592
Muslim	92	164	11
Christian	919	1,174	649
Jew	2,636	3,492	1,710
Tribal	4	7	—
Others	28	47	6

According to the Census Report of 1941, so far as literacy is concerned, "The general tale is of pronounced increase amounting in the case of India as a whole to 70 per cent over 1931 for the whole population. Of this the male increase is 60 and the female 150. There was of course an enormous field for improvement of female literacy. For the Provinces the increase is 80 and for the States 70, with the sex components more or less the same. The most remarkable figures, are returned by the Punjab which professes a 140 per cent increase to a present literacy of 13. This figure covers a 110 per cent increase for males and no less than 390 per cent for females. One would prefer to wait for a definite sorting based on examination of the slips before further discussion

1 *Ibid*, p. 339.

of such phenomenal figures. The record for the U.P. seems prima facie more in keeping with general observation and experience. Here the literacy figure is below that of other areas and all major provinces, and is still only 8 per cent for the whole population; but the decade increase is 80 per cent all over, 70 for men and 170 for women. Even now, however, the percentage of literacy among women is only 2. Bombay leads the provinces, as it did in 1931 and shows also an increase of over 100 per cent to produce a 30 per cent literacy for males and 9 per cent for females. Bengal follows with 16 per cent all over, representing 25 for males and 7 for females."[1]

It is worth noticing that the Census Report of 1951 does not give even a single paragraph to the returns of literacy. Either the Commissioner was actuated by the belief that literacy figures have no bearing on a Census, or that as every single individual out of a population of 360 millions is a literate, no observation was called for.

Our progress is terribly slow and such a rate of progress would take decades to have a fully literate population. When we compare the results achieved by Soviet Russia which started in 1917 practically at the same level of illiteracy, and liquidated it almost completely by 1936, there is no reason why the same results cannot be achieved by us in a properly planned society.

Retrospect and Prospect

We have now considered the problem of population in its main bearings and have to face a two-fold question. Is India over-populated? Are we too many? And the further question if we are too many, what can we do towards the establishment of a better social order in which our population will be adjusted to our new economic standards of a civilised existence? If we are reconciled to our present miserable existence—miserable not only because of our poverty, but because of a lack of sense of the dignity and beauty and value of human life which poverty brings in its wake—we may regard our present numbers with equanimity and may comfort ourselves with the thought that we are not too many. We may even look unconcerned at future increases in our numbers, so great is our power to put up with the privations resulting from increasing poverty, and

1 Census of India, 1941, Vol. Part I, pp. 31-32. It is surely surprising that the Census Report should give figures in percentage increases which do not give us a correct picture of the state of literacy. The figures suggest a tremendous improvement. There can be no doubt that, whatever real increase in literacy took place, was due to the great literacy drive under the popular ministries and particularly the Congress Ministries. Taking the real rise in a decade, the picture is still very gloomy. It needed ten years to increase the literacy from 80 to 121 per thousand.

so earnest our desire to preserve the social institutions and principles of earlier days. If, on the other hand, we are thinking ahead of a new India where our people will live, not on the level of abject poverty, but on a level which will ensure to them a healthy, efficient and cultured life with opportunities for creative work for increasing numbers, the reflection will force itself upon us that there is something fundamentally wrong with our present population trend, and that we need to plan our economic life and our social environment so as to lift up our people from the present enervating struggle for existence and free them from the listlessness to which their poverty has consigned them.

The problem of India's population affects almost every aspect of economic life, and has a profound significance for the future of the country. In any scheme of social or economic or political reconstruction, the present size of the population and the rate at which it is growing have to be taken into account. We have indicated to what extent our present numbers are an obstruction to our future national welfare; judged from any point of view, a reduction in our numbers or at any rate a check on further increase appears to be an urgent necessity. We do not contend that our people should be raised to that artificially high standard of living to which in the West a few nations may have attained. "There is nothing morally wrong in a man being a vegetarian and a teetotaller and his wife and children being able to live very much more cheaply than people who adopt the European standard of comfort."[1] To live on simple fare so long as it is nutritious is not a crime. It was Lord Crew who in 1911 denounced on this ground the attempt to exclude Indians from employment on vessels trading to the ports of New Zealand. But the simplicity of life in India is a simpicity of a very different kind. The poverty of the Indian peasant and villager means "want, insecurity, and utter inability to provide for the most elementary needs of life. It is a cruel mockery to exhort the bulk of our people, to reduce their wants or ask them to be true to the wisdom of the East, when the majority of them are suffering from utter want and starvation."[2]

There has been a certain amount of confused thinking on this question. Some of us, distressed by the sordidness of policies adopted by the so-called advanced countries in the

1 Lord Crew quoted by Gyan Chand, op. cit., p. 318.
2 Gyan Chand, op. cit., p. 319.

interests of a higher standard of life, have simply raised our hands in horror and cried out, "No, not for us. Far better our age old ideal of 'plain living and high thinking'." It is not difficult, however, to see that this defeatism is unwarranted. In regard to this question, as in regard to many others, there is a golden mean, a sort of an optimum, which is calculated to bring out the best in man. Any standard of life below this is an open invitation to poverty, misery and crime. A standard above it may mean aggrandisement at the cost of others, the pursuit of wealth for its own sake and of power that may bolster up this insatiable greed.

No one who has carefully followed the history of the population problem in India in its different phases can dispute the statement that there are more people in India than the soil and its present productive capacity can support. "By far the major part of Indian manpower is underfed, diseased, illiterate and unskilled....The *per capita* food supply is much less than one-third that in the U.S.A. Even with 'plain living and high thinking,' which has been the ideal of Hindu civilisation, one is inevitably driven to the conclusion that there exists in India today, under the present state of her industrial efficiency, double the size of the population which could live with a moderate degree of opportunity for moral and national development."[1]

The Census Commissioner for 1931, Dr. Hutton, has contended that the maximum population possible is very far from identical with the maximum population desirable, and "that the point has not yet been reached at which the ability of the country to feed its occupants is seriously taxed." He further says: "Generally speaking, the maximum density of the agricultural population can be far greater in India than in Europe, not only on account of the greater fertility of the land but on account of the diminution in the absolute necessities of life corresponding to a less rigorous climate." Whilst Dr. Hutton is prepared to recognise the difficulties connected with excessive subdivision and an abnormal surplus landless population, he seems to view unconcerned the prospect of further increase in our population. The same unconcern seems to underlie the view expressed by Dr. P. J. Thomas[2] and Mr. D. G. Karve[3] that production in India has been increasing faster than popu-

1 R. K. Das quoted in "The Situation in South and East Asia" by Col. Sir Charles Close, "*Population*" Vol. I, No. 1, 1933.

2 "Population and Production" (1931-32) in *Indian Journal of Economics*, Vol. XV, 1934-35.

3 "Poverty and Population in India," 1936.

lation. In a slightly different line of optimistic vein Dr. Baljit Singh thinks that the deficit in Indian diet of 22 per cent below physical requirements, due to wastage in wedding feasts and avoidable loss through animal, bird and insect pests, can be met by husbanding our resources in agriculture, industry and trade, so as to realise optimum conditions of living for the growing population.[1] What we forget is that if, by stopping feasts, killing all sources of pests and changing dietary habits, we improve the conditions of life for the population of today, the increased numbers of tomorrow may leave us in a worse condition, with all prospects of avoiding waste and further changing of habits exhausted. It has been aptly observed: "It is not the problem of doubling, or perhaps even tripling, the product of backward regions that staggers the imagination; it is the need for an indefinite continuation of such an expansion in order to keep up with an unending growth. The demographic problem is not that of putting an immediate end to growth, but of checking growth before the populations become unmanageably large,—for example, before the present numbers are doubled."[2]

In our analysis and review of agriculture in India, we have endeavoured to point out how, under present conditions and with present methods of cultivation, our agricultural population sunk in poverty, dragged into the vortex of price fluctuations in the international market, dependent on the freaks and uncertainties of rainfall, has been forced by the pressure of circumstances into a starvation standard in spite of a fertile soil—a standard which is threatened with prospects of a further deterioration due to increasing numbers. We propose to consider in a separate section the relation of our food resources to the population; but the fact that we have reached the saturation point has been emphatically expressed in the actuarial report appended to the Census Volume of 1931. Mr. Vaidyanathan quotes in the first place Carr Saunders: "Infanticide was employed in India and China until recently; it has now been abandoned, and no other method of keeping the size of the families small has taken its place. An examination of the social conditions suggests that the people are not living as well as they might; famines are not uncommon, and are never far off. The symptoms point to over-population, of which the

1 "Population and Food Planning in India," 1947, p. 101.

2 F. W. Notestein, "Problems of Policy in Relation to Areas of Heavy Population Pressure," quoted by K. Davis, op. cit. p. 222.

cause would seem to be the failure to replace the custom of infanticide by some other method of regulation." He further adds: "No greater proof is required of the fact that what primarily ails India is over-population than the miserably low standard of living of the masses.... To subject the soil to increasing pressure of the addition of nearly 34 millions in a decade[1] when the standard of living is proverbially low is a situation that should cause real alarm in the minds of the well-wishers of India. Without an addition in real wealth, of at least the same extent, of which there has been no very large indication, the existing low standard of living is sure to be depressed further, leading to further over-population and consequent increase in the loss of spirit of enterprise. For successive generations of life on less than a bare margin of subsistence and the natural indolence and despondency which such a state engenders have probably made the majority of Indians abstain from making any strenuous effort to raise their standard of living, which could be achieved, in the first instance, by limiting the size of the families. Being itself both the cause and effect of over-population, the low standard of living of the average Indian complétes what is called the 'vicious circle.'"[2]

Those, who take a more sanguine view of the problem, have in view, we are aware, the vast potentialities of our resources. True, our resources are vast. True, the achievements of modern science have been miraculous, yet, when all this is admitted, we must not allow ourselves to be swept off our feet by vague generalisations as to potentialities. What rate of growth of technical progress should we count upon during, let us say, the next 25 or 30 years? That is the primary question in this context. The moment we ask ourselves this question, we are face to face with the wide gap that is likely to persist for at least a generation or two between our expectations and our performances, a gap which should make us pause and ponder. Economic planning, as we have throughout insisted, is unthinkable except as an aspect of social planning, and no social planning is worth its name which refuses to evolve a planned population policy. This has obvious social and political implications, some of which are pointed out below.

Possible Remedies

It is obvious that the only answer to the question "Is India

1 This refers to 1931. We added another 36 million by 1941, and in the last decade, there has been an addition of 42 million in the Indian Union.

2 Census Report, 1931, p. 150.

over-populated?" is an answer in the affirmative. Assuming the presence of over-population, we have to ask ourselves what can we do with these distressingly large numbers to alleviate their sufferings with the help of the resources at our disposal.

There are three directions along which we may seek for relief so far as numbers are concerned in the immediate future: (1) There is the method of relieving population pressure by the possibility of migration outside the country or by a redistribution of the population inside the country. (2) There are a number of economists who look to a system of planning our production, both agricultural and industrial, on such a large and intensive scale as to increase our national income within the next few years to double the present amount. (3) There are those who believe that if we cannot immediately reduce our numbers except by such calamities as are beyond our control, we can at any rate check the further growth of our numbers, by limiting the size of our families through the spread of the knowledge of birth control.

Emigration

When Western economists and demographers talk of emigration as a remedy for over-population, they have in mind only the White people. The Asiatic people never exist in their calculations, though Chinese and Indians are the only people who really need the help of emigration to solve their problem. Emigration outside India as a measure of population relief is a matter beyond our control. The total number of Indians living abroad has been estimated at roughly 2½ millions. About a million and a half live within the British Empire, mostly in Ceylon, Burma, Malaya, Mauritius, British Guiana and South Africa. As regards Ceylon and also Burma, events before and after the war distinctly indicate a growing opposition against the settlement of Indians in those territories. It was a familiar cry before the Japanese occupation of Malaya that Malaya could not accommodate any more Indians. As regards Dominions like Australia, Canada and New Zealand, they have definitely adopted a policy of keeping their territories as a preserve for future occupation by the Whites exclusively. Under the quota system ever since 1922, the U. S. A. have definitely adopted a policy of discrimination against the Asiatic races, revised only at the end of the War to meet Indian sentiment. The disabilities from which Indians suffer in South Africa,

East Africa and Kenya are likely to increase rather than decrease as recent events like the passing of the 'Pegging Bill' in South Africa and Dr. Malan's proposed legislation foreshadow. The impossibility of seeking relief through migration is typically illustrated by the legislative restrictions which countries like Ceylon and Burma have recently imposed. Under these circumstances, we cannot look for relief with regard to our numbers in the immediate future to migration abroad. We will have to maintain our population on our own resources. Even if migration on a substantial scale were feasible, for countries like India and China, possessing a high fertility rate, it would provide only a temporary solution, as it would relieve pressure on the food supply and so encourage further multiplication.

Dr. Radhakamal Mukerjee[1] and Dr. Chandrashekhar[2] make a strong plea for a policy of mass migration of Indians in large numbers to settle the empty spaces in the world. Curiously enough these pleas have been taken as an indication of growing Hindu Imperialism by Western demographers, and India is considered to be the coming danger spot of the world.[3] So long as racial prejudices and White immigration policies remain dominant, in a world which is euphemistically characterised as "one world," there can be no hope for emigration even as a partial and temporary solution of our population problem.

With regard to the redistribution of our population inside our own country, whatever possibilities of redistribution do exist, they do not justify any hope that it can materially help in solving our problem. Looking to the total extent of the land classified as culturable waste, it might be thought that 98 million acres of such culturable waste might offer reasonable opportunities for the settlement of our surplus population. It was pointed out, however, by the Agricultural Commission—a statement that has been contested—that much of this land could not be brought under tillage, and that "the statement reported annually in a volume which is issued under the imprimatur

1 "Race, Lands and Peoples" (1946).

2 "Hungry Peoples and Empty Lands" (1953).

3 Cf. "It should be remembered that it is not poverty alone, that leads a people to talk about pressure of population, but the growing awareness of relative poverty, and the knowledge that through the exercise of power other peoples have been able to secure a better living. An India of 800 million will be more aware of her relative poverty than she is today, and probably better able to muster force to obtain what her people consider a fair share of the world's resources." Warren S. Thompson, *Scientific Americ*, Feb. 1950, p. 14. Criticising Dr. Mukerjee's suggestion Vogt, in his "Road to Survival" observes, "a heavily industrialised India, backed up by such population pressure, would be a danger to the entire world." p. 228.

of the Government of India, that very nearly one quarter of the total area of British India is culturable but not cultivated, is calculated to give rise to misconceptions which it would be well to avoid."[1] Even recognising that these limitations exist, it would not be inappropriate to stress the necessity for gathering and supplying information to the public about the potentialities of the land in each State classified as culturable waste so as to help the migration of population from one part of the country to another.[2]

It is impossible to shut our eyes to the new forces of inter-State jealousies and rivalries that have been brought into play during the last twenty years and which were unfortunately aggravated in the name of Provincial Autonomy after 1935. A Federal form of Government for the whole of India has its advantages, but giving the States a free hand in planning their separate economic life might be more harmful than otherwise in the larger interests of the country as a whole. We have witnessed the reluctance of States with surplus food to part with such surpluses; and it was the heavy pressure the Central Government brought to bear upon them due to the food crisis that led these States to revise their policy.[3]

Increase in Production

Apart from migration or redistribution, we may, it is said, so plan our economic life as to increase to a phenomenal extent our total annual income both through the development of our agriculture and the intensification of our industrial production. As regards agriculture, we have discussed elsewhere in detail the possibilities of increasing our agricultural production in the future. Given the existing framework of economic society, the changes in agriculture, which are within the range of practical politics, include measures like improved varieties of crops, control of crop pests and diseases, extension of irrigation, better use of manures, the use of artificial fertilisers and better implements of cultivation.[4] But so long as the basic obstacles to the development of Indian agriculture are not removed—and these

1 Report, p. 605.

2 The phenomenal influx of millions of refugees from Pakistan into Indian territories have made the situation even more serious than before.

3 The increasing agitation for the constitution of new States on a linguistic basis might well be viewed with alarm, if the States are to be given full economic autonomy. One is tempted to believe that the moving force behind such agitation is not a disinterested love for culture and language but the prospect of developing the potential resources of the State even at the cost of exploiting the masses.

4 Thus, cf. De Castro: 'The English could sensibly have increased Indian farm production through scientific seed selection, and so they did, for such cash crops as cotton, sugarcane and jute. Adequate fertilization say, the Food and Agr.

include fragmentation and subdivision, zamindars, the enormous agricultural debt, and the equally enormous surplus agricultural population—it would be futile to hope for any substantial improvement in our agricultural production. This does not of course preclude the possibility of transforming our whole agricultural organisation with the adoption of a carefully planned long-term agricultural policy.

We have now adopted a planned agricultural policy under the First Five Year Plan, with targets of production in agriculture. The Census Report of 1951 in one of the final chapters raises the question, "Shall we be able to develop agriculture so as to keep pace with the numbers" of the growing population estimated to reach 520 million by 1981?

Planning for the production of a particular year, the Commissioner points out, in mines or factories is one thing; it is another thing in agriculture, as the monsoons are beyond human control. Development of "productivity" is all that we can aim at. Assuming the average yield of food grains as 55.6 million tons, as the gross area sown to food grains is 78 per cent of the area sown to all crops, the total agricultural productivity is roughly 70 million annual tons. Our population today is 360 million. The level of productivity needed with increasing numbers is indicated by the following table:—

Year	Population in millions	Needed agricultural productivity in million tons	Targets of development in million tons
1961	410	85	15
1971	460	96	26
1981	520	108	38

If we express these figures as percentages of the level of productivity prevailing about 1951 (70 million tons) the increase

Organisation technicians, could raise Indian food production by 20 per cent. So far, artificial chemical fertilisers have been used for virtually none but export crops." Geography of Hunger, op. cit. p. 160.

It is interesting to note, however, the observations of F. Yates Head of Statistics Department at Rothamstead: "The population of India is increasing at the rate of about 2½ million per annum. The target production of the projected new ammonium sulphate plant in that country is 70,000 tons nitrogen per annum. This, if all utilised in food crops, will provide a subsistence ration for one year's increase in the population." "Four Thousand Million Mouths," Ed. by Clark and Pirie, 1951, p. 69. It may also be noted that there are agricultural scientists like Sir A. Howard who believe that synthetic fertilisers are a long way from furnishing the soil with all the elements necessary to its complete restoration. Chemicals and machines can do nothing to keep the soil in good heart. By their use the processes of growth can never be balanced by the processes of decay. All that they can accomplish is the transfer of the soil's capital to current account.

So also, cf. "It is easier to bring a youth to maturity than it is to restore an old man to the prime of life; equally it is easier to introduce soil conservation into societies which have their period of flowering before them, than into those which have it behind them. From this human ecological standpoint the prospects that soil conservation will be an important factor in relieving the food deficiency of India and China are poor, whereas the prospects that it will still further increase the food surpluses of the Americas and the Antipodes are good." G. V. Jacks in "Four Thousand Million Mouths", pp. 41-42.

required is of the order of 21 per cent before 1961, 37 per cent before 1971 and 54 per cent before 1981.

The schemes contemplated by the Five Year Plan for irrigated land are calculated to increase agricultural productivity by 3.6 million tons annually, when all the major irrigation projects are completed. We shall thus need 15 million tons to overcome current shortages and keep pace with the growth of population. Minor irrigation schemes are designed to increase the irrigated area by 11.3 million acres. Productivity is expected to increase by 2.4 million tons annually. Assuming that the two parts of irrigation development, at a cost of over 500 crores, will be put through, they will yield in course of time 6 million tons. We shall thus have secured just about two fifths of what we need by 1961.

Taking into account the fact that by 1981 we can increase the total acreage under cultivation from 320 million to 350 million, which is about the limit, and also taking into account all other methods of increasing the yield per acre—green manuring, mineral fertilisers, better rotation, improved seeds, protection against pests and diseases—our estimate of increased agricultural production is 24 million tons annually. This increase will fall short of our needs before 1971. By that time, observes the Census Commissioner, we shall have completed three successive five year plans, and we shall have to face the fact that our effort to keep pace with the unchecked growth of population is bound to fail, with the law of diminishing returns already in operation.

The Commissioner refers to the proposals of the Planning Commission for educating public opinion in favour of limitation of the size of the family, by giving advice and suggesting methods. He considers the idea visionary; and suggests the control of improvident maternity—limiting the family to three children, whether alive or dead, and achieving a stationary population at the level of 450 million. But if family planning is visionary, educating the public to avoid improvident maternity seems as difficult of accomplishment.

As regards industrialisation, the outbreak of the second world war gave us opportunities for the development of industries, which despite all limitations would have enabled us to accomplish in two years what would otherwise have taken twenty years to achieve, if there had been proper planning. We have indicated in our sections on industry the possibility of developing a new type of industrialisation, which will enable

us to reconcile our small cottage industries with large-scale production. We are not oblivious of the fact that under the policy of discriminating protection there has been a growth in the investment of foreign capital in Indian industries. We are not also oblivious of the enormous amounts of foreign capital invested in Indian enterprises during the last hundred years. We have also to recognise Gandhian attitude on the question of large-scale production. But the fact remains that we have already industrialised ourselves, and that however much we may disapprove of evils which accompany modern industrialism, we cannot go back to a pre-industrial economic order.

Will industrialisation on an increasing scale solve our population problem? It is necessary in this connection to call to mind a few facts. Large-scale industry to-day occupies roughly three million workers. Counting three dependants to every worker, the total number of dependants on large-scale production will not exceed twelve million souls. Our total population dependent on industries to-day is 37 million. In addition, we have to take into account the surplus population dependent on the soil, the landless labourers, whose number has been variously estimated at between 80 million and 100 million. Will industrialisation, on however large a scale it is organised, succeed in absorbing about 120 million people, including dependants? Those who, assuming no radical alteration in the economic structure, talk like Sir M. Visvesvaraya of capitalist enterprise helping in the intensification of our industrial production and thus solving our population problem, seem to forget the elementary principle that machinery means the displacement of human labour on an ever increasing scale. If in Western industrialised countries, omitting for the moment the enormous destruction that took place during the war, the saturation point had already been reached, so that the growing number of the unemployed could not be absorbed in increasing production, can we entertain any reasonable hope of so expanding our industrial production under the present capitalist structure as to absorb even a quarter of our huge surplus population?

The conclusion inevitably forces itself upon us that increased production by mechanical methods, both agricultural and non-agricultural, cannot by itself rapidly relieve the pressure of population. Even in the stress and strain of the war, the fighting nations in the West had been planning for the distribution rather than the increased production of wealth as witnessed by the

Beveridge report. We in India are still in the early stages of a capitalist industrial order. If our growing numbers are not to frustrate whatever benefits increasing production on a large scale is to bring to us, we must think in terms of distribution as much as in terms of production. It is possible for critics to tell us that there are no prospects of any radical change in our economic reconstruction policy. Such critics will tell us that capitalism will be more and more strongly entrenched in the country and that to speculate about the possibilities of a new economic era is futile. To such critics our only reply is that the tempo of economic and political change during the last 25 years might well make us think in terms of a new order which will secure for our countrymen the opportunities for a healthier and a fuller life such as have been denied to them so far.

Control of Numbers

It is difficult in a sense to speculate about the future of the Indian population. As regards Western countries between 1876 and 1926, there was a marked decline in the birth rate; though the immediate effect of this decline was offset by a declining death rate, the prospect of a reduction in the numbers of the White population was set in the background of an increasing population in India and China. It was forgotten that the relative proportions of the European and Asiatic communities have changed in favour of the former.

The declining birth rate in the West was partly the result of the use of birth control, a practice which at one time was regarded as sinful and condemned by the Christians. But even today, there are not wanting leaders of thought, apart from the Churches, who revile birth control as 'racial suicide,' perhaps inspired by the fear of being outbred by some imaginary 'inferior race.' The patriots concerned about the necessity of out-rivalling hostile neighbours in numbers stress the duty of bearing children. France wants more soldiers. Even in Great Britain there is growing alarm at declining numbers. There are others who advocate birth control not for themselves who are the elect and chosen, but for the inferior masses who by their rapid multiplication may bring about racial deterioration.

In any discussion of birth control, it is desirable to keep distinct the two different issues, the economic issue of an increasing population sunk in poverty like that of India and the issue of improving the race by selective breeding—a question more for the biologist than for the economist. If we thus distinguish between

the purely economic bearings of the birth control movement and the eugenic problem of improving the race, we would not only avoid confusion of issues but we shall be able to take a more objective view of the problem so far as it bears on the question of numbers. The experience of the last half a century abundantly shows that with a high standard of life, the responsibilities of parenthood are increasingly recognised and human beings are ready and willing to limit the size of the family from prudential motives. It may also be pointed out that the family limitation characteristic of the richer classes may depend to some extent on socially undesirable qualities like love for luxuries instead of family affection.

It must be remembered, however, that mere limitation of numbers will not by itself solve the problem of our poverty. If birth control measures have a place in the economic planning of India, such measures can only be part of a larger planning including within its scope, not only the intensification of our production, but likewise a social and educational reorganisation of our national life based on an appreciation of values, which would not subordinate the pursuit of truth and beauty and goodness to the greed for wealth and possessions. Birth control leagues have been formed for the purposes of propaganda in a number of countries including Holland, Germany, France, Spain, Belgium, Italy and Mexico. Mrs. Sanger, one of the leading advocates of the movement, toured the world in 1922 arousing considerable interest in Japan, China and India. Of late, restrictive measures have been adopted in France and Italy and in the U.S.A. The law forbids the mailing of printed matter or any device designed to prevent conception. A number of the States in the U.S.A. make the giving of contraceptive information a crime.

The principal objection to the movement on moral grounds has come from the representatives of orthodox religions especially the Roman Catholic Church. They argue that children constitute the socially necessary culmination of marriage. The same view finds expression in the writings of Gandhiji who regarded sexual union without the desire for children as wrong and immoral in the case of married people. Such arguments seem sound against induced sterility but not against an intelligent regulation of the size of the family. The support of a small family on a decent standard of life makes for discipline and a healthy family life much more than unrestricted reproduction with a large progeny struggling for existence. Catholics, more-

over, do not oppose the limitation of families as such, but the use of artificial checks. So also did Gandhiji. "It is one thing when married people regulate the number of their progeny by moral restraint, and totally another when they do so in spite of sexual indulgence and by means adopted to obviate the result of such indulgence. In one case people gain in every respect; in the other there is nothing but harm."[1]

It is obvious that the opposition to birth control is based upon the nature of the means employed rather than with reference to the motives. There can be no more effective reply to this objection than the one given by the British Committee on the Ethics of Birth Control. "Civilisation itself has been the story of man's control over nature, mainly by mechanical means. Medical opinion has been somewhat slow to support birth control, but the Medical Committee of the British National Council of Public Morals has declared unanimously that "no impediment should be placed in the way of those married couples who desire information as to contraceptives, when this is needed for medical reasons, or because of excessive child bearing or poverty." With wider use of contraceptives, health and longevity have increased, and infant mortality has decreased. It has been also pointed out that birth control has resulted in the advancement of material well-being, in the elevation of the status of the wife, and in the promotion of the health and education of the children when the intervals between them are adjusted to parental health and resources. As a matter of fact, in Western countries, public opinion largely looks upon the large families of earlier generations as evidence of improvidence and unrestrained sexual indulgence. Control is regarded as a primary means of attacking poverty and of elevating social life above the level of reproduction and food-getting. The frequency of destructive wars, finally, has raised in many families doubts about raising sons and daughters only to be fodder for guns and bombs.[2]

It must not be forgotten, however, that birth control as a method for limiting numbers will always be a question of individual choice, and that a national policy in this behalf imposing measures for the limitation of population can only be successful in the sense that it may influence public opinion, so that social con-

1 M. K. Gandhi, "Self-Restraint versus Self-Indulgence," p. 8.

2 It has been said that a long transition period gradual increase in production with concomitant increase of population cannot be sustained in monsoon Asia without recurrent disaster and constant menace to the security of all nations. A more rapid transition to the effective control of fertility is imperative. Is such a rapid transition possible or practicable?

siderations should carry great weight with individual parents in deciding about the size of their families. A national policy with regard to population is only possible in the form of propaganda through the cinema, the radio, and the press, awakening the masses into a sense of their responsibility towards the generations yet unborn.

Returning to the case of India, if our country is over-populated and if any addition to our present numbers is to be regarded as undesirable, to what extent can the birth control movement help us in restricting our numbers? The birth control movement in India is just in its infancy. It has been publicly advocated by a number of medical writers. A Neo-Malthusian league was formed in Madras supported by Maharajahs and High Court Judges. The Census Report of 1931 even suggested that "In view of the present rate of increase efforts to reduce the rate of infantile mortality should be preceded by precautions to reduce the birth rate, and that if the luxury of 'baby weeks' be permitted, they should at least be accompanied by instructions in birth control." Subhas Chandra Bose in his presidential address at the Haripura Congress advocated a definite restriction of numbers. The All India Women's Conference stressed the necessity and desirability of making birth control knowledge available to the people of India. The Mysore Government has established birth control clinics in the principal hospitals of the State, and a few clinics have also been established in other parts of India. Of late a Family Planning Association has been formed. The question of limiting the size of the family was the subject of discussion at an International Conference held in Bombay in December, 1952. Clinics are being run under Municipal supervision in Bombay city and steps are being taken to popularise the birth control movement. The First Five Year Plan recognises the gravity of the situation created by the rapid increase in population, and stresses the need for family planning. It allocates 65 lakhs of rupees for a programme which will include medical advice in Government hospitals and health centres, the suggestion of chemical, mechanical or biological methods of contraception as may be necessary in individual cases, experiments in the rhythm method and other methods, collection of information on attitudes affecting the size of the family, and research into the physiological and medical aspects of human fertility and its control.

We cannot overlook the difficulties of introducing contraceptive methods in a country where the vast majority of the

population look upon a large family as a token of God's blessings, and regard the reproach of barrenness as a terrible punishment for crimes committed in earlier lives. The practice of universal and of early marriage is a social custom and not necessarily followed from religious motives, though it is religious arguments which are resorted to whenever people want to oppose a change in social custom. We must also take into account the difficulty of converting the masses of India into support of birth control movement. They are not in a position to read any literature on the subject. Political organisations like the Congress and the Praja Socialist Party do not actively support the movement. It has been said that as a rule politicians who canvass votes are not likely to risk the support of their voters by advocacy of such measures.[1]

It is really a tragedy that a personality like Gandhiji who had such an immense hold on the masses was opposed to modern methods of birth control, and advocated mere self-restraint to solve the problem of large families. Not only that, but he condemned birth control methods and this makes the task of propaganda very difficult. One wonders why he should have regarded contraceptives alone as unnatural and not eye-glasses. A more serious difficulty is that of suggesting a suitable contraceptive which will be acceptable to the masses, and which can be made cheap enough to be brought within their means. In a country like India not only do doctors as a rule know little about the scientific side of birth control, but nine out of every ten villages are practically without doctors and dispensaries.

If, therefore, the movement for birth control is to be pro-

1 Cf. "It may be hopeless to attempt to graft the ideas of family limitation, that have matured in the social conditions of the West, upon an unchanged Eastern mode of existence. The ideas would never have emerged in the West had the social and economic soil not been suitable for their growth. There is no certainty that under changed condition of life the populations of France or Britain or Sweden might not increase rapidly. There is as little evidence that under changed conditions the population of India or Japan would necessarily enter a similar phase of stability to that experienced in France." Clark in "Four Thousand Million Mouths," p. 21.

It is gratifying that Pandit Nehru at least should have realised the gravity of the situation arising out of increasing numbers, though most of our Gandhian leaders and some of his colleagues in the Cabinet still hold to the views of Gandhiji.

When Mrs. Margaret Sanger emphatically states that "she never met any religious opposition in India, except in Travancore where 30 to 40 Portuguese missionaries walked out of the Congress of the All India Women's Conference," she was evidently relating the attitude of educated city women anxious to parade their ultra liberal views. See Proceedings of International Congress on Population and World Resources" 1948, p. 93.

In this connection during the course of the discussion at the Cheltenham Congress, Mrs. Woodside, representing the Institute for Research in Social Science, N. Carolina, pointed out how in her State birth control was available in all the Public Health Departments, but that, though the service was there, the uneducated, highly fertile type of mother whom it was desirable to help to reduce her fertility did not take advantage of it. (Proceedings, p. 161).

moted in India as a measure of national reconstruction, it must be made part of a larger programme, which should aim at providing an adequate health organisation which should disseminate information amongst the people through personal advice by health visitors. Social awakening sometimes comes not by slow stages but miraculously fast. Economic discontent may be a more powerful medium for social change than education or propaganda. In the West, the movement has spread in spite of the opposition of the Churches and the State. In the new order, with an enlightened Government, with modern methods of propaganda at its disposal, a new generation may be brought up, prepared to challenge age-long traditions and to establish new social norms. For, the control of population, as we have already suggested, is not a matter for legislation or for executive action but a matter that lies entirely within the choice of individual parents, who may be educated into a sense of their social responsibilities, so that in determining the size of families they may keep in mind the welfare of future generations.

Concluding Remarks

As we have already said, the population problem in the next thirty years will be the impact of growing numbers on our ill-balanced economic and social structure. Hence, the population policy will have to be rationally integrated in a planned economic policy based upon a broader social policy. To achieve such an objective, we shall have to fight on all fronts, political, social and economic.

The difficulties against which we have to contend are the difficulties associated with our inability to plan our economic life according to our conception due to vested interests—capitalistic, provincial, linguistic. These are likely to be increased by minority groups, large or small, whose conception of their own interest might conflict with the larger interests of the community as a whole. It must be remembered, however, that the new economic order that we envisage would be one which is only feasible on an all-India basis and in which there can be no rights without functions. But, in view of the difficulties mentioned above, however ardent and earnest our desire to plan our economic life on a comprehensive basis, it will have to be subordinated to the immediate necessities of political compromise except in the case of a successful social revolution which does not seem to be feasible in the near future due to the apathy of the masses.

If these difficulties are overcome—and unity of purpose is secured between the various warring and conflicting interests, our difficulties with regard to the future will not be ended. They will have begun; for we have to plan our national life in all its phases. In this planning, we shall have to face the problems of our social pathology—poverty, misery, disease and crimes—problems that are directly or indirectly connected with our growing numbers.

In all planning for the future of India one sociological phenomenon must never be overlooked. It is this—that whilst we may be able to control our death rate, and bring it down with every measure that we adopt in improving health, in dealing with disease and removal of sources of pestilences, control of birth is still largely dependent on voluntary realisation of its need by the individual family, and that the birth rate depends on a set of complex social and religious factors that are not easily amenable to legislation. We cannot change over night the traditions that have been transmitted from generation to generation and have become part of our deeply rooted outlook on life. We have, therefore, to face in all probability, a future when with a declining death rate and a steady high birth rate the dangers incidental to a phenomenal addition to our existing numbers will be aggravated, and all our efforts at improving our economic standards prove futile.

No one can refuse to admit that there is much about population phenomena that is still unknown, and much more that cannot be brought under human control. "Before the war many economists were prepared to accept and even to endorse the estimates of future populations which suggested that most Western countries were confronted with an universal decline in population. The most alarming pictures were painted of the effects of this decline and of the impossibility of arresting it and of the menace which thereby confronted Western countries. Again, the forecasts were found unreliable. For instance, in Great Britain, the present population is considerably larger than the pre-war forecasts,.... and some countries, in which alarms about under-population were raised before the war, are now regarded, in some quarters, as being confronted with over population."[1]

We should remember, however, that even in the most rationalistic of our plans an element of unpredictability frequently

1 "'The Economist and Public Policy," John Jenks in *Lloyds Bank Review*, April, 1953, p. 25.

enters, reminding us of our limitations. Our control of social phenomena lags far behind our control of the physical environment; and Nature has sometimes a way of revenging itself and humiliating man's presumptuous pride. As in our dealings with the soil we may extract too much out of it to frustrate the purpose of supporting life, so in our dealings with our fellowmen our zeal in dealing with the factors that work for survival may bring untold surprises that lie beyond our control.

CHAPTER VIII

AGRICULTURE

Introduction

Agriculture has always been the primary industry of India even from early days. The proportion of population dependent on agriculture has risen from about 65 per cent in 1872 for undivided India to 70 per cent in 1951 for the Indian Union. Four-fifths of the teeming population of the country still continue to live under rural conditions, and even the factory labour of the towns as well as the commercial classes continue to retain their connection with the villages from which they have migrated. But whilst the predominantly agricultural character of Indian economic organisation is a matter of common observation, there has not been an equally common recognition of the vastness and variety of our agricultural production and our agricultural resources. This country occupied an important position in the world amongst producers of primary products, both in the shape of food crops and raw materials. It was a position which was not usually recognised partly because of the general ignorance and indifference in the West to Eastern regions, and partly because the inferior status of the country as a dependency had overshadowed the relative significance of the volume of production inside the country. The agricultural production of India was directed during the last hundred years towards securing an exportable surplus of raw materials to meet India's obligations resulting from her connection with Great Britain and not to meet her own requirements.

The Partition of the country has seriously affected India's position *vis-a-vis* the world in agriculture as can be seen from the following table:—

Area under Certain Crops in India as Percentage of World Area[1]

	Pre-Partition 1940	Post-Partition 1951
Jute	99.2	49.7
Rice	48.6	31.5
Cotton	29.4	19.2
Linseed	14.1[2]	27.6
Wheat	13.4	7.6
Barley	6.8	7.4

In production of some of the staple agricultural commodities, India before Partition produced about 52 per cent of the world total production of groundnuts, 98 per cent of the total production of jute and 45 per cent of rice. Today (1951) the figures are reduced to 32, 41 and 20.7 per cent respectively. India is still the largest producer of groundnuts, sugarcane and hemp, the second largest producer of cotton next to U.S.A., and the third largest producer of tobacco, next to U.S.A. and China in the world.

It was the outbreak of the war in 1939 that brought with it a clearer recognition of the importance of India and its possibilities in the shape of its agricultural resources. The increasing recognition of our agricultural potentialities, however, did not lead to any specific achievements. A few considerations bearing on the larger and long run welfare of our country were ignored. In the first place, our primary problem is that of adjusting our food resources to the growing population of our country. Under a competitive system, the prospects of expanding our land resources by bringing uncultivated land under cultivation are very limited. In the second place, it was not to the larger interests of this country to accept a scheme like that to which the Eastern Group Conference committed us, resulting in the exploitation of our agricultural resources in the interests of the Empire. Such a scheme meant agricultural expansion in a wrong direction. It also implied that India devoted its attention exclusively to agricultural developments, and meant the perpetuation of a system in which this country continued to play the part of exporter of agricultural products in return for the imports of manufactures and machinery. The price India had to pay for such limited agricultural expansion was the abandonment of a programme of developing the heavy industries, and certainly it was not worth paying.

But despite this, the characteristically inelastic supply of

1 Based on League of Nations Statistical Year Book, 1941, and Year Book of Food and Agricultural Statistics, 1952, F.A.O. U.N., Rome 1953.

2 Based on figures for 1936.

our agriculture was borne out by war time experiences. All the attempts to bolster up production by the "Grow More Food" campaign started after April 1942 did not bring in any substantial increase in production. "The results achieved by this campaign have not been spectacular." The following table shows the trend in agricultural production:[1]

Indian Agricultural Output (000 tons)

Commodity	1938-39	1940-41	1942-43	1943-44
Rice	26,069	23,838	26,194	32,393
Wheat	10,267	10,283	11,242	10,016
Jowar, Bajra, Maize	12,750	14,444	15,070	14,647
Linseed	442	434	411	395
Groundnuts ..	3,275	3,700	2,821	3,263
Other Oil Seeds	1,450	1,640	1,643	1,540
Sugarcane ..	3,389	5,800	5,076	5,696
Cotton ..	4,990	6,080	4,554	5,060
Jute ..	9,690	5,460	—	5,430
Tea	452	464	564	554

But these figures do not reveal the basic facts. One has to remember the utter unreliability of Indian agricultural statistics and the deliberate restriction of cotton and jute production and encouragement of food production, while drawing conclusions from these figures.

The future agricultural expansion of India must in the main be directed to the satisfaction of the internal needs of the country in the shape of food and other primary products. It must also be determined by the consideration of the problem of supplying such raw products as may be consumed by our industries. The large scale, for example, on which we are raising oil seeds of all kinds suggest vast possibilities of using them in the building up of new industries like paints and varnishes, oils and dyes for internal consumption. If these results are to be achieved we need, not the private enterprise on a profit-making basis such as has marked the growth of economic life in the West, and which has led to economic chaos, but a corporate planning of our national life involving the adjustment of our production to our needs.

When a Viceroy of India as early as 1869 observed that the duties which in England are performed by a good landlord have in India mainly to be discharged by the government which alone can command the requisite capital and knowledge, he could not have anticipated the acuteness of the agricultural problem, as it faces the country today with its vastly larger population and greater poverty. It was a striking recognition, however, of the principle which should underlie all attempts at dealing with

1 "War Economies of Primary Producing Countries," A. R. Prest, 1948, p. 39.

the agricultural situation in India—the principle, namely, that only the State with all the resources at its command can organise and plan the future utilisation of our agricultural resources.

The principal uses to which the land of any country might be put include cultivation, forests and grazing land. There has also to be taken into account land used for residential purposes in towns and for industrial and mining purposes. The problem of land utilisation has only recently attracted attention in civilised countries. The National Conference on Land Utilisation held in the U.S.A. in 1931 called attention to the need for an inventory of the nation's soils classified on the basis of their agricultural value, and for a programme of soil conservation whereby damage from erosion, destruction of organic matter, overgrazing and flooding might be reduced to a minimum. Out of this Conference there were appointed a National Land Use Planning Commission and a National Advisory Commission on Land Use. No such attempt was made in our country despite the agricultural scientific services set up under the direction of the Imperial Council of Agricultural Research. Some data on soils and land utilisation in limited areas have been collected by the Irrigation Departments of various States, by agricultural experimental stations and other research units. Lack of a comprehensive scientific survey of soil and land utilisation seriously hampers all attempts at agricultural planning. The Planning Commission, recognising the need for an all-India survey of soils and land utilisation, recommend the constitution of (a) a Central Land Utilisation and Soil Conservation Organisation at the Centre, and (b) Land Utilisation and Soil Conservation Board in every State, laying down in detail the composition and functions of the two types of organisation.[1]

Distribution of Land

The following table shows the land resources of the Indian Union in 1949-50:[2]

Distribution of Land in the Indian Union

	in millions of acres	percentage of the total
Forests	93	15
Net Area Sown	266[3]	43.5
Current Fallows	58	9
Cultivable Waste	98	16.5
Not available for Cultivation ..	96	16
Total ..	615[4]	100

1 The First Five Year Plan, pp. 303—5.
2 *Ibid*, p. 153.
3 About 36 million acres are irrigated land.
4 Includes 3.5 million acres for which details are not available.

The total geographical area of the country is 811 million acres, but land use statistics are available for only about 615 million acres. The bulk of the 196 million acres for which land utilisation statistics are not available consists of mountains, deserts and inaccessible forests. The total cultivated area is 324 million acres. About 35.5 million acres grow more than one crop. The Planning Commission point out that the trends in the agriculural situation point to two main facts that (a) although the gross cropped area has increased as a result of double cropping, little new area has come under cultivation during the last four decades and (b) that changes in price structure do affect the pattern of crops even though a large part of the area is cultivated in tiny holdings. "In spite of the increasing pressure of population very little extension of cultivation to waste lands has taken place during the last forty years."[1]

When we look at the distribution of our land resources, we find that the forests occupy about 15 per cent of the total area of India, whilst 16 per cent roughly is classified as land not available for cultivation. We have already indicated the importance of preserving our forest land and preventing it from further depletion. We shall later on refer to the desirability and importance of retaining the closest possible relationship between the agricultural and forest departments. What we would notice here is the consideration of the possibility of converting a portion of the vast area classed as not available for cultivation into forest land. In the U.S.A. the area of forest land is about the same as that of farm land, and yet the Research Commission on Social Plans appointed by the President in 1929 looked with favour on the further development of forest land, by the conversion of low grade agricultural land into forests owned by public agencies. A commission was appointed in 1940 in Bengal to report on the possibility of preserving forests in the Province. In a country, where 16 per cent of the total land is marked as not available for cultivation, and another 16.5 per cent as cultivable waste making a total of nearly 194 million acres, there is obviously ample scope for laying down a carefully planned land utilisation policy, with a view to converting by afforestation some parts of these immense

1 The Partition led to the following distribution of the total land resources:—

	Indian Union (in percentage)	Pakistan (in percentage)
Net area sown	84	16
Current fallow	82	18
Forests	94	6
Not available for cultivation	76	24

Calculated from figures supplied by Prof. C. N. Vakil, op. cit. p. 12.

land resources into fuel and fodder reserves administered by the Forest Department. It is true that this whole land may not be fit for afforestation; but if trees of different kinds, suitable to different soils are selected, a large portion of these lands can be afforested. With an agricultural population of 250,000,000 cultivating uneconomic holdings, burning manures which should go into the land as food, with cattle lacking proper grazing facilities, we need a forest department which, apart from growing timber, should provide facilities to the agricultural community in the shape of wood for implements, firewood, and leaves and grazing for cattle. Such a policy would be one of giving, and not a policy of taking away from the villagers, such opportunities as are indispensable for a healthy rural development.[1]

Even as long ago as 1890, a resolution of the Madras Government referred to the necessity of correcting the idea "that as soon as the forest is reserved, cattle and men are to be excluded, and it is to be worked for the profit of Government rather than for the benefit of the people. It cannot be too strongly affirmed that the chief object of the reserve forest throughout the greater part of the country is the provision of pasture, small timber, fuel, and leaves for manure and litter." A subsequent resolution issued by the Government of India in 1894 laid down the principle that "the sole object with which the state forests are administered is the public benefit." The Government of India also stated in the the Resolution that minor forests and pastures and grazing grounds must be managed in the general interests of the population of the tract. Forty years later, the Agricultural Commission Report gave us figures of the percentage of live stock grazing in forests to the total number as below:—

Bombay	13.4	per cent
C. P. and Berar	25.7	,, ,,
Madras	5.9	,, ,,
Punjab	13.0	,, ,
U. P.	2.6	,, ,,

A careful perusal of the chapter on Forests in the Agricultural Commission's Report shows that it was obsessed by the idea that the supplies offered by the Forest Department in the shape of fodder for cattle or fuel wood for the cultivator were

1 Cf. Monograph on France in "European Conference on Rural Life," Geneva, 1939, p. 36. Referring to the long term value of reafforestation in France, the report says that such a policy would result (1) in yielding a valuable crop of timber, (2) in offering work to the agricultural population in periodical thinning out, cutting, felling and carting, (3) in reducing the cost of various kinds of wood which the cultivators require for repairing timber work and agricultural implements, (4) establishing factories, paper mills, saw mills, etc., and (5) in the making of roads ensuring easier communication between scattered villages. Above all in the case of India in affording cheap fuel wood and restoring the use of cowdung as manure, reafforestation assumes even greater importance.

to be determined, not by considerations of welfare of the cultivating classes, but by questions of cost of transport and "economics of the supply of fuel." Even after fifty years of the public announcement of the Government of India's forest policy, the Forest Department found it difficult to get over the businessman's attitude that forests are not made for men, but men for forest finance. Sir John Russell's report on the work of the Imperial Council of Agricultural Research published in 1937 referred to the future possibility of extensive planting of the 'cultivable waste', and the desirability of studying the fodder trees more fully so as to know which to choose for the plantations.

It is gratifying to note that the Planning Commission realising the importance of forests in the economy of the country have suggested an "immediate reconnaissance survey of waste land with a view to evolving a system of balanced and complementary land use."[1] It suggests immediate steps for extending the area under forests in three directions: (a) afforestation as a measure to prevent soil erosion, (b) extension of tree lands, (c) establishment of village plantations to increase the supply of fuel and fodder. The Forest Policy Resolution of May 12, 1952, marks the dawn of a new orientation. "India as a whole should aim at maintaining one third of its total land area under forests. As an insurance against denudation, a much larger percentage of the land, about 60 per cent should be kept under forests in the Himalayas for their protective functions." So also in the Deccan and other mountain tracts liable to erosion. In the plains where the ground is flat and erosion not a serious factor the proportion to be attained should be placed at 20 per cent. In view of the pressure of agriculture, efforts at extension of tree lands should be concentrated on river banks and other convenient places not suitable for agriculture. The rapid implementation of the resolution is essential, not through slogans and exhortations and spectacular planting of trees, mostly left to themselves after the show, but as part of a well planned scheme.[2]

Current Fallow

There can be no better evidence of the present backwardness of agricultural production in India than the fact that 58 million acres of land out of a total of 615 million acres or roughly about 9 per cent is returned in agricultural statistics as current fallow.

1 The First Five Year Plan, pp. 285 *et seq.*

2 For rational utilisation of land resources, See "Land Utilisation in Tropical Areas" FAO Development Paper No. 17, January 1952.

In early days, when sciences connected with the chemistry and biology of the soil constituents were not yet developed, the empirical wisdom derived from practical agriculture had made farmers realise that the fertility of the soil could be conserved not only by allowing rest to the soil, but by the introduction of new crops and by intelligent crop rotation. In the West today, the fallow has been replaced by intertilled row crops such as corn, potatoes and roots. In dry farming lands a hay crop has been found to maintain the fertility of the soil. Alfalfa, for example, is becoming an important crop in the Central plains of North America where it is grown in rows for seed production. A subsistence type of production naturally involves a wastage of our productive resources, by compelling the farmer to grow food on all kinds of soils as a mode of living, and to attempt to conserve the fertility of the soil by the practice of fallowing. It is worth noticing that, except taking account of the fact that "the area under current fallows remained at the level of 1919-20 till the early forties and thereafter showed some increase, particularly in the cotton growing tracts, possibly because of a sudden decrease in cotton area which was left partly fallow,"[1] the Planning Commission has nothing to say about fallow lands and their utilisation in the context of modern agricultural science.

The Distribution of Land under Cultivation

The gross area cultivated with crops in 1949-50 was 301,876,000 acres distributed as below:[2]

	in 000 acres		Per cent
Foodgrains	235,573		78.1
Sugar	3,702		1.2
Condiments and Spices	2,459		0.8
Fruits and Vegetables	5,003		1.6
Other food crops ..	1,645		0.5
Total food crops		**248,382 (82.8)**	
Fibres	13,785		4.6
Oilseeds	24,275		7.9
Drugs and Narcotics	1,973		0.7
Fodder crops	11,171		3.6
Indigo	19		0.1
Other non-food crops	2,271		0.7
Total non-food crops ..		**53,494 (17.8)**	
Total area cropped ..		**301,876**	

If we compare the percentage of the distribution of cultivated land in British India in three typical periods, namely, (1) immediately before the outbreak of the first world war, (2)

1 The First Five Year Plan, p. 154.

2 Indian Agricultural Statistics, 1949-50, Vol I (1952), pp. 3-4.

1927-28, the period before the beginning of the great depression, and (3) 1940-41, the results may be briefly indicated as below:

Percentage of cultivated area in British India

	Food grains and other food crops	Non-food crops
1913-14	81.9	18.1
1927-28	80.9	19.1
1940-41	80.0	20.0

There was during these thirty years a trend towards the conversion of land under food grains into land under fodder crops. In other words, land that was hitherto used for the growth of food crops was considered too poor, and used for grazing cattle. What was more serious was conversion of the area under food crops into area under commercial crops like cotton and jute, as seen from the following tables:—

Area in millions of acres

Year	Under food crops	Under non-food crops	Under cotton and jute
1913-14	190	42	19
1927-28	192	45	18
1939-40	197	47	25
1940-41	198	50	29
Index numbers showing increase in area with 1913-14 as base year			
1913-14	100	100	100
1927-28	101	107	95
1939-40	104	112	132
1940-41	104	119	153

These tables would indicate that whilst the acreage under food produce increased by four per cent in these thirty years, the acreage under cotton and jute increased by 53 per cent. And when the war cut off our supplies of rice from Burma, our ministers made a pathetic appeal to the cultivators to substitute food crops on the land hitherto brought under commercial crops like jute and cotton.

In 1937, Sir John Russell observed: "The areas under cotton, sugarcane and wheat have risen, corresponding with the increased area under irrigation, and the increase has kept pace with the increase in population. On the other hand, the acreage under food crops shows much less rise, and, if the figures can be accepted, the acreage per head of population has actually fallen."[1] We can see in this agricultural trend the outcome of the absence of a national policy. The entry of India into the international market under British Rule naturally led to changes in agricultural production which gave an incentive to the cultivation of cash crops in preference to food crops. This trend in

1 Op. cit., p. 7.

the direction of cash crops was further emphasised by the interest of Government departments of Agricultural Research and experimental farms in improving the quality and introducing new varieties of cash crops, while food crops were neglected. No attempt was made to arrest the unhealthy trend till recently when the stress of the war revealed our very precarious food position, as well as the problem of markets for our short staple cotton. The food crops grown in place of cotton were bajra and jowar, while the area under jute was diverted to rice mostly as a result of the high price of rice.

Speaking generally the crop pattern in the Indian Union has remained unchanged—82 per cent food crops and 18 per cent non-food crops. As a substantial proportion of the land under jute and cotton has been transferred to Pakistan after the Partition, the area under cash crops should have materially declined. But the desire to be self-sufficient in cotton and jute, because of the unfortunate differences with Pakistan, has led to an appreciable increase in area under these two fibres from 9,812,000 to 11,458,000 acres under cotton and from 818,000 to 1,278,000 acres under jute in the period 1947-48 to 1949-50. This increase in area under the two fibres would otherwise have gone to the production of food which this country so badly needs.[1] Apart from the possibility of bringing additional land under cultivation, which does not appear to be so very feasible in a short term period, the only solution to the problem lies in the increase in *per capita* productivity of land, so that the need for diversion of land under food to cash crops may be obviated. The prevailing notion that it is cheaper to export cash crops, and buy food with the foreign exchange thus earned in the cheaper world food markets, is fallacious. There is no guaranteed market for our cash crops, and food being a political weapon it is essential for strategic reasons to give first priority to self-sufficiency in food and make food production expand in relation to our growing population. If we fail to reorient our land utilisation policy from the one followed under British Rule, we shall be lacking in a sense of responsibility towards the future generations.[2]

1 The Planning Commission has to admit in a footnote that a diversion to commercial crops took place in 1952. (p. 209).

2 Cf. "Surely it is better to take the realistic view, so well expressed sometime ago by Prof. J. D. Black of Harvard: "Considerable food does move from one country to another, but the adjustment of population to resources is still largely a matter for each country by itself......each country must work out a solution for itself." Surely, it is upto every country in the world to practice the good old virtue of thrift, and to do the utmost to develop home resources." Our Undeveloped World, Dudley Stamp, 1953, p. 149.

Agricultural Production

Rice

Rice is the staple food of the Indian population and one of the important products of India. The acreage under rice and the production figures show the following variations during the last sixteen years:[1]

	Average area (000 acres)	Average production (000 tons)
1936-39	58,665	21,199
1947-48	64,415	21,244
1948-49	72,485	22,597
1949-50	75,414	23,170
1950-51	75,975	20,295
1951-52	75,595	20,767

It will be noticed that while the acreage increased in these sixteen years from 58.6 to 75.6 million acres the production declined from 21.2 million tons to 20.8 million. The States in which the growth of rice crop forms an important item are West Bengal, Bombay, Bihar, Orissa and Madras. The sowing operations extend from May to August and the crop is harvested in December and January. Each State consumes the greater part of its own production. Bengal and South India export a part of their production and used to import low grade rice from Burma. On the whole, India consumes more rice than she produces. Most of the imports of rice used to come from Burma. Thus in 1939-40 rice imports from Burma amounted to 2¼ million tons.

The great rice producing countries in the world are India, Burma, China, Japan and Thailand, but amongst these India takes the front rank. In 1951 India's production amounted to 32,000,000 metric tons, as compared with 5,500,000 of Burma, 11,302,000 of Japan and 7,250,000 of Thailand. The following table compiled from the F.A.O. Year Book throws further light on the question of rice production:[2]

Variation in acreage and production of rice in India

	Area under rice 000 Hectares	Index Number	Production in metric tons	Index Number
1936-38	25,081	100	34,882	100
1949	30.519	121.7	35,312	103.3
1950	30,746	122.6	30,930	90.8
1951	29,782	118.7	31,649	92.6

Taking even such a short range period as 1936-51 it appears that while the acreage under rice increased by 18.7 per cent the production declined by 7.4 per cent.

1 India, 1953, Government of India, p. 248.

2 Yearbook of Food and Agricultural Statistics, 1952, Vol. VI, part I Production, FAO, United Nations, Rome, 1953.

Rice is the staple food of the population. 71,000,000 acres out of a total of 248,000,000 acres devoted to food crops are covered by rice. And yet while wheat and cotton received and continued to receive attention from the Agricultural Department and Research Institutions, rice was till recently neglected. Sir John Russell referred to investigations undertaken of late on the quality of rice. He observed that the term quality was ambiguous. It might mean market quality which was really commercial desirability. It might also mean nutritive quality which was related to value as a human food. The most important properties were those associated with the nutritive value of rice. He recommended that chemical investigation on the quality of rice be carried out by nutrition experts, and "either brought within their ambit or discontinued." As regards the declining yield per acre of the rice crop, the Council of Agricultural Research was advised by Sir John Russell to arrange for sample surveys "in order to obtain definite information on the matter."[1]

There was a decline in area as well as yield of rice in all Asiatic countries during the post-war years. In response to the recommendation of the Preparatory Commission on World Food which included proposals to establish a Rice Study Group, the F. A. O. convened a Rice Study Group at Trivandrum on 16th May, 1947. A Rice Meeting consisting of representatives of 19 Governments and eight Organisations met in Baguio, Philippines in March 1948 to consider measures for overcoming the critical shortage of rice, the basic food of nearly half of the world's population. This meeting recommended the creation of an International Rice Commission, and the F. A. O. established it in November, 1948, with Mr. W. H. Cummings as Executive Secretary. Three meetings of the Working Party on Rice Breeding have been held so far; and the International Rice Hybridization Project has been undertaken.[2] An International Training Centre in Rice Breeding was conducted in September-December, 1952, at the Central Rice Research Institute, Cuttack.

Wheat

Wheat is second to rice in importance as a food crop in India. It is grown in East Punjab, U. P., Bombay and Madhya Pradesh. Undivided India was the third largest producer of wheat in the world after U.S.A. and Canada; the Indian Union after the

1 Op. cit. p. 24. A Central Research Institute was established by the Government of India at Cuttack, in 1946, to intensify research on rice.

2 One aim of the Project is to produce a hybrid of the Japanese and Indian varieties of rice to increase the yield per acre in India.

Partition has, however become a deficit country. Now our number is sixth in the world as nearly 4 million hectares under wheat with higher productivity belong to Pakistan. The acreage under wheat and production show the following variations during the last sixteen years:[1]

	Average area in 000 acres	Average production in 000 tons
1936-39	26,153	7,277
1947-48	20,843	5,570
1948-49	22,342	7,650
1949-50	24,114	6,290
1950-51	24,134	6,374
1951-52	23,235	5,768

The F.A.O. Year Book gives us the following figures concerning the area and production of wheat:

	Area in 000 Hectares	Index number	Production 000 metric tons	Index number
1934-38 (average) ..	10,802	100	7,411	100
1949 .. .	9,041	83.7	5,741	77.3
1950	9,758	90.3	6,391	86.4
1951	9,767	90.4	6,476	87.4

These figures leave no doubt of the fact that the average yield per unit of land, whether in terms of acres or hectares, has declined substantially during the last sixteen years. Taking the figures for the same period, as supplied in the Government of India official publication,—"1953"—we find that whereas the average yield per acre in 1936-1939 for wheat was 623 lbs. in 1951-52 it declined to 556.[2]

Millets

There are different varieties of millets, the principal being jowar, grown in Madras, Bombay, Madhya Pradesh, U.P. and Hyderabad States, and Bajra cultivated in Bombay, East Punjab, U.P., Madras and Hyderabad States. Both these are sources of food and fodder, the grain being utilised as human food, while the cattle get the stalks and leaves. The acreage under jowar and bajra is about 38 and 22 million acres respectively. The annual production of jowar varies between 6 and 7 million tons per year, that of bajra between 2 and 3 million tons. Small millets

1 India, 1953.

2 The figures supplied by official publications of the Government of India have not only been challenged by the Food Member of the Central Government. Even the Planning Commission observe in their Report that "it would not be justifiable to place too great a reliance on them for purposes of comparison of yield as between different years as a measure of land fertility." Sample Surveys may prove as unreliable as statistics furnished by the Agricultural Department. The raw recruits with a few months training who are employed for supplying more accurate scientific data may be pronounced ten years later as full of weaknesses in the manipulation of figures as village mamlatdars are today. It is not the methods, so much as the men who work these methods, that are at fault.

cover about 11 million acres producing 1.8 million tons. "India 1953" gives us the following figures of the relative yield per acre of jowar and bajra:

	Average 1936-39	1947-48	1948-49	1949-50	1950-51	1951-52
Jowar	437	369	305	338	315	322
Bajra	351	303	246	273	256	221

Barley

The acreage in barley in 1951-52 was 7.8 million acres as compared with 6.5 million acres in 1936-39. It is chiefly grown in U.P. and Bihar. India is the fourth largest producer of barley after China, U.S.A. and Canada; but its exports were negligible and continue to be so, as the crop has to satisfy a large internal demand. Barley, along with bajra and jowar, is the poor man's food in India. The production varies round about 2 million tons a year. It is said to be richer than rice and millets in protein and fat.

Maize

Maize is widely grown in Bihar, U.P. and East Punjab. This crop is mainly consumed by men and cattle. In the U.S.A. about 75 per cent of the crop is consumed by hogs and horses, whilst in India the same amount forms the food of human beings, the leaves and stalks being given over to animals. The acreage varies between 7 and 8 million acres and the production is about 7 million tons per year. The total area under production of maize in 1951-52 was 8 million acres and the production 2 million tons. There were heavy imports of maize during the food scarcity years of 1948 and 1949, aggregating 2.8 and 1.4 million metric tons.

Pulses

Pulses form an important part of the food resources of the people. They are valuable from the point of view of nutrition: the pulses help to balance the diet, as they supply the protein which is lacking in rice. Sir John Russell in his report confessed that neither the Department nor the Council had any schemes for studying the pulses, and expressed a pious wish that in view of their importance as sources of protein "a conference should be held with nutrition experts to discover whether more (research?) work could usefully be done, and, if so, on what lines." The pulses, moreover, fertilise the land and supply the organic matter which the soil requires. They form an important rotation crop, as they absorb nitrogen from the air and contribute to the restoration of what the soil may lose through other crops.

At an experimental station in India it has been shown that the effect of a gram crop was enough to remove all differences between manurial treatment given to the succeeding grain crop. The cultivation of pulses requires less rainfall than the cultivation of rice and both the seeds and stem constitute good cattle fodder. There is very little export trade in pulses, the whole of the yield being consumed internally.

The following table shows the acreage and yield of gram during recent years:—[1]

	Gram	
	Area in 000 acres	Production in 000 tons
1936-39	16,703	3,862
1947-48	19,336	4,530
1948-49	20,497	4,535
1949-50	20,497	3,667
1950-51	18,709	3,593
1951-52	16,719	3,157

Jute

Undivided India had a monopoly for the production of jute as a commercial crop. After Partition we produce about 41 per cent of the total world production. West Bengal, Assam and Bihar are the chief producers. Its importance arises from the fact that jute and jute manufactures constitute about 35 per cent of the total value of exports from the whole of India and are our chief dollar earner.[2]

The following table indicates the variations in acreage and production of jute during 16 years:

	Area in 000 acres	Production in 000 bales of 400 lbs. each
1936-39	862	1,904
1947-48	652	1,659
1948-49	834	2,055
1949-50	1,163	3,089
1950-51	1,454	3,301
1951-52	1,951	4,678[3]

The cultivation of jute in Bengal was not adjusted to world requirements from time to time, with the result that in 1930-34—the period of depression—the annual value of the crop fell from 44 crores of rupees in 1919-29 to 15 crores in 1930-34. A jute Enquiry Committee was appointed, and the Bengal Government

1 India, "1953."

2 About a third of all India's foreign exchange earnings in 1948 came from this commodity and 66 per cent of hard currency earnings had their origin in the same source." Report of the Export Promotion Committee, Government of India 1949, p. 27.

3 Subject to revision.

decided to launch a campaign for the voluntary restriction of the acreage under jute in 1935. These measures, whatever their influence, were followed in 1939-40 by the declaration of war and a phenomenal demand for jute and jute products. The fluctuations in the jute market led to the fixing of minimum and maximum prices in May, 1940, by an ordinance of the Bengal Government. It was later on decided to adopt drastic restriction of the jute crop by a reduction in the hours of work in the mills and restriction in acreage. It may also be noticed that in 1936, an Indian Central Jute Committee was appointed with a Government grant of Rs. 5 lakhs per year for carrying on experiments and research and collection of accurate statistics.

The Partition broke up the entire economy of Bengal, in which despite the acreage under jute being only 10 per cent of the cropped area, as against 72.5 per cent under rice, jute and jute manufactures constituted about 50 per cent of the total value of exports from Bengal. As a result of the Partition the major area under raw jute, about 75 per cent, went to Pakistan, whereas the entire jute industry remained in India. Thus the Indian jute industry is dependent on the imports of raw jute from Pakistan to a substantial extent. In view of the political tension between the two neighbours, an Integrated Production Programme was formulated in 1950-51, aiming at self-sufficiency in food, cotton, jute and sugarcane. Even before this, attempts were made to grow more jute in India so as to become less dependent on Pakistan and its production increased from 20.6 lakh bales (400 lbs. each) in 1948-49 to 33 lakh bales in 1950-51. In the first year of the Plan an additional quantity of 13.8 lakh bales has been produced.[1] As the target for jute laid down by the Planning Commission is an increase of 63 per cent above the level of 1950-51, the additional production necessary to reach the target is only 700,000 bales. It is to be noted, however, that India does not grow the best quality of jute for making standard hessian cloth. To this extent India will have to import hessian jute from Pakistan; else she would have to shift her pattern of jute manufactures. The percentage of hessian manufacture to total production has fallen from 43.5 in 1946-47 to 33 in 1951-52.[2]

Cotton

India stands next to the U.S.A. in the world production of cotton. Besides supplying the raw material for our textile industry, cotton played a considerable part in our expert trade.

1 "India," 1953, pp. 256-57.

2 "Overseas Economic Survey—India," Rowland Owen, July 1952, p. 221.

Before Partition more than 50 per cent of the total production was exported in normal times before the war, Japan being our chief customer. About 40 per cent of our total production was absorbed by the mills and the rest by our cottage industries in spinning and weaving. The production is distributed over all parts of the country; and it is a feeder for the hand industry, which plays even in our own time a large part as a subsidiary occupation of the rural population in the economic life of the country. In the foreign markets apart from Japan, we had no substantial customers, partly due to the inferior quality of the cotton, and partly due to our inability to compete with our relatively higher cost of production. The Imperial Council of Agricultural Research and the Indian Central Cotton Committee have been busy with the vital problem of improving the methods of cultivation and the quality of production. Egypt and U.S.A. yields are 6 and 3 times as much as India's.

The Partition resulted in the assignment of the fertile and irrigated territories of Sind and West Punjab to Pakistan. In 1946-47 out of 14.9 million acres under cotton, Pakistan's share was 3.2 million acres, i.e., 22 per cent, and the remaining 11.7 million acres were within the territories of the Indian Union. Of the area under irrigated cotton, two-thirds went to Pakistan. The shares of different staples of cotton were 45, 62 and 76 per cent of undivided India's production of 9.9, 21.5 and 11.6 lakh bales under the three staple lengths of short, medium and long respectively.[1] The Indian mills have lost the supply of about a lakh bales of long and medium staples. This loss is being made good by imports of long staple cotton from East Africa, Sudan and Egypt. In recent years there has been a rise in imports from U.S.A. due to the trade deadlock with Pakistan and non-availability of Pakistan cotton.

The following table shows the variations in acreage and production of cotton during the last 16 years.[2]

	Area in 000 acres	Production in 000 bales (392 lbs. each)
1936-39	20,969	4,146
1947-48	10,655	2,188
1948-49	11,293	1,767
1949-50	12,173	2,128
1950-51	14,556	2,971
1951-52	16,213	3,134

1 "Cotton Resources of India," Kalidas Sawhney, Secretary of the Indian Central Cotton Committee, in *"Indian Cotton Textile Industry"* Centenary Volume, 1951, p. 69.

2 India, 1953, op. cit.

The production of different staples of cotton is evidenced as below:[1]

	Short	Medium	Long
1948-49	18%	45%	37%
1949-50	21.5%	50.5%	28%
1950-51	21%	47%	31%

The following table reproduced from the British Overseas Economic Survey of India brings out the salient features of cotton consumption by Indian mills:[2]

Cotton consumption by Indian Mills
Bales of 400 lbs. gross (392 lbs. net)

	Cotton year 11 months 1-9-51- to 31-7-52	Cotton Year 1950-51	Cotton Year 1949-50	Cotton Year 1948-49
Indian Cotton	2,987,453 73%	2,516,963 70%	2,544,174 69%	3,123,915 73%
Foreign Cotton	1,084,018 27%	1,105,125 30%	1,140,711 31%	1,130,721 27%
Pakistan Cotton	4,185	17,578	203,442	410,956
U.S.A. Cotton	678,828	443,501	173,916	51,731
East African Cotton	162,868	228,382	281,503	185,967
Egyptian Cotton	157,524	306,306	403,082	395,850
Other Cotton	80,613	109,358	78,768	86,217
Total of Indian and Foreign Cotton	**4,071,471**	**3,622,088**	**3,684,885**	**4,254,636**

In 1951-52 out of the imports of 1.2 million bales, U.S.A. supplied about a lakh bales and East Africa 1.3 lakh bales. In undivided India exports of cotton used to exceed imports; but after Partition exports have been strictly controlled. The export quota fixed for 1951-52 crop was only 352,000 bales. Our chief customers are Japan and U. S. A. In the years immediately after Partition the area under cotton was restricted to grow more food. Since 1950, however, the removal of restrictions has led to an increase in area and production of cotton. An integrated production programme was formulated in 1950-51 to achieve relative self-sufficiency in food, cotton, jute and sugar. It became part of the First Five Year Plan, which has now been integrated into the Ten Year Programme of land transformation. Dependence on foreign cotton is now considered inadvisable. The target of increased cotton production has been fixed at 42 per cent above the 1950-51 level. In 1951-52 cotton production was 33 lakh bales as compared 29.7 lakh bales in 1950-51, and the target to be reached by 1955-56 is 42.3 lakh bales.[3] There is reason to believe that recent increase in the production of cash crops has been at the cost of food produc-

1 Owen, op. cit., p. 196.
2 *Ibid*, p. 197.
3 The First Five Year Plan, p. 77.

tion, and suggestions have been made that the target should be achieved by (1) greater use of improved seed and (2) increasing the yield per acre of cotton by manuring, extension of irrigation facilities and adoption of improved agronomic practices.[1] Out of 15 million acres under cotton, 800,000 acres only are under irrigation. Efforts are made to increase the production of long staple Egyptian cotton in Mysore, long staple American cotton in Madras and East Punjab, and extra long staple cotton in West Madras.[2]

Sugarcane

The cultivation of sugarcane has made enormous progress in recent years, as the result of the protection afforded to the sugar industry. The U. P and Bihar are the largest producers of sugar, their share averaging 73 per cent of the total production. The Imperial Council of Agricultural Research must be credited with having done good work for the development and growth of improved varieties of cane. Whilst the Java factories cultivate sugarcane around their factories with modern appliances, the factories in India are dependent for their supply of cane on a large number of cultivators. There are great potentialities of the development of the industry with the standardisation of cane and the introduction of improved methods of cultivation. There have been attempts in Bengal, U.P., Bihar and Madras for regulating the purchase of cane and fixing basic prices.

The following table shows the growth in acreage and production of sugarcane during the last sixteen year:[3]

	Area in 000 acres	Production in 000 tons
1936-39	3,276	4,455
1947-48	4,056	5,817
1948-49	3,752	4,869
1949-50	3,624	4,938
1950-51	4,214	5,616
1951-52	4,727	5,895

The average yield of cane per acre has been gradually declining in recent years, and is now about 14 tons as compared with 56 tons in Java and 62 tons in Hawaii. The percentage of recovery of sugar is also low as compared with other countries, 9.9 in India as against 11.5 in Java, 12.3 in Cuba and 12.1 in Mauritius. The factors responsible for the low yield of sugarcane and low sucrose content in cane are: extensive methods of cultivation, lack of adequate manures and fertilisers, non-availability of ade-

1 Sawhney, op. cit., p. 71.

2 Owen, op. cit. p. 199.

3 India, 1953, op. cit. Figures for production are expressed in terms of raw sugar (gur).

quate quantities of disease free seeds of quality cane, irrigation and climatic differences. A Five Year Sugarcane Development Scheme is in operation with a view to improve the yield and sucrose content.[1]

Tobacco

Tobacco ranks high in importance among the numerous agricutural products. India is the third largest tobacco producing country in the world after U. S. A. and China. The chief centres of the tobacco crop are in West Bengal, Madras, Bombay, Bihar and the U. P.

Below we give figures of area under tobacco and annual production during the last sixteen years:[2]

	Area in 000 acres	Production in 000 tons
1936-39	902	338
1947-48	827	234
1948-49	803	255
1949-50	860	264
1950-51	902	263
1951-52	764	225

A reduction in tobacco acreage and production in the post-war period may be due to food shortage. At the same time the country has been able to increase exports substantially as can be seen from the following table:

	Metric tons
1948	32,000
1949	34,000
1950	45,000
1951	50,000

The increase in Indian exports is mainly due to the search by Europe of soft currency areas to get their tobacco. The maintenance of high prices for U. S. tobacco and absence of financial support to U. S. exports are likely to increase Indian exports to Europe. But the food shortage may prevent her from taking full advantage of the favourable export situation. With a further improvement in the quality of Indian tobacco, however, Indian exports to Europe are likely to increase.[3] The United Kingdom is the chief customer, having imported 106 million lbs of tobacco in 1952 valued at Rs. 16.8 crores.[4]

The tobacco industry in India is not yet well developed. It is divided into bidi industry—the poor man's smoke, cigar manufacture and cigarette manufacture. The bidi industry is

1 Owen, op. cit. p. 183.
2 India, 1953.
3 Tobacco, F A O Bulletin No. 20, October 1952.
4 Owen op. cit. p. 185.

one of the most unorganised industries in India with thousands of small establishments all over the country, making millions of bidis per day consumed all within the country. Half a million workers, it was estimated, were employed in 1944 in the industry. Madhya Pradesh employed 125,000 workers, and South India and Bombay 100,000 each. Children have been employed in these factories and attempts have been made by some States to prohibit under the Employment of Children's Act the employment of children.

The cigar industry is mainly confined to Madras State and Trichinopoly. Dindigul and Madras City are important centres of cigar manufacture. There were 90 members of the Cigar Manufacturers' Association Trust in 1944, and a few factories outside the Association. All cigar factories are small scale except one in Dindigul. There is also a co-operative cigar factory in Dindigul consisting of 127 members, out of whom 80 are cigar workers.

Nearly all the cigarette factories are large-scale units employing hundreds of workers and come under the Factories Act. There were four factories in Bengal, six in Bombay and one at Bangalore in 1944.[1] Minimum wage rules were fixed under the Minimum Wage Act, 1948, in Tobacco (including Bidi) manufactories in Bihar, Madras, Madhya Pradesh and Ajmer. The U. S. A. Virginian tobacco is imported to blend it with Indian tobacco for the manufacture of cigarettes, the amount in 1951-52 being about 4.3 million lbs. at 1.76 crores.

There is ample scope for improvement in the quality of Indian tobacco and along with it in the tobacco industry in India as well as in the export trade.

Tea

Among plantation crops in India tea is the most important. India is the largest producer of tea in the world. The indigenous plant was first discovered in Assam in 1820. The Assam Company was the first tea concern transferred to the company by the East India Company who worked it for five years. The average acreage under tea increased from 7,47,000 acres in 1936-39 to 807,000, acres in 1949-50. The production figures are 585 million lbs in 1949, 602.8 million lbs in 1950 and 618 million lbs in 1951, as against the production of 595 million lbs in undivided India. 4,000 acres under tea cultivation have gone to Pakistan, that produced about 52 million lbs. of tea in 1950. About 82 per

1 Report on an Enquiry into Conditions of Labour in Bidi, Cigar and Cigarette Industries, D. V. Rege, Government of India, 1946.

cent of tea is grown in North India, chiefly in Assam and the Dooars, and exported through the port of Calcutta.

The year 1932-33 was one of the worst for the tea industry. In addition to the worldwide depression, there was considerable over-production, with the result that producers of tea all over the world were faced with declining prices and accumulation of stocks. To check over-production a bill was passed in the Legislative Assembly in 1933, restricting production and limiting export. The export quota which was fixed at 82½ per cent of the standard exports rose to 92½ per cent in 1938-39. Due to accumulation of stocks, the quota for the following year was fixed at 90 per cent. The outbreak of war gave rise to new conditions. In the United Kingdom, the entire tea trade passed under the control of Government. A tea controller for India was appointed to administer the emergency scheme. There was a strong demand for practically all kinds of tea and the export quota was raised to 95 per cent in October, 1939. The International Tea Committee reduced the quota for 1940-41 to 90 per cent for all participating countries. The following table shows the position as regards the export of tea to selected countries:—

(in lakhs of rupees)[1]

	Total value of exports to all countries	U.K.	U.S.A.	Canada
1949-50	72,23	42,26	6,81	4,70
1950-51	78,09	46,65	7,95	4,29
1951-52	93,29	60,91	6,29	4,31
1952-53	80,17	55,23	5,95	4,25

The peak was reached in 1951-52. Since then there has been a fall. The figures also bring out the great dependence of our tea industry on the U. K. market. In this connection it is worthwhile noticing the comments of the Reserve Bank of India: "Owing to larger world production, Indian tea has met with greater competition in the world market....Notwithstanding the fact that the total exports of tea in 1951 gave indications of being steady, it is important to recognise that India too has been steadily losing its share of the U.K. market. In the U.S.A. too where tea imports from all sources have been steadily declining, Indian tea is losing ground to its competitors in the shrinking market."[2]

In 1952-53 the value of exports declined from Rs. 93 crores to Rs. 80 crores. Tea was decontrolled in the U.K. from the middle of 1952, and with falling prices, the buyers market was

1 Based on Reports on Currency and Finance for the years 49-50 to 52-53, Reserve Bank of India.

2 *Ibid*, 1951-52, p. 115.

replacing the sellers market. This created a crisis in the Indian tea industry. and the Government of India appointed an official committee—the Rajaram Rao Committee—to investigate into the causes of the crisis. The Committee recommended immediate enquiries into potential markets in Egypt, Turkey, Iraq, Burma and Russia.

The complete decontrol of tea from October, 1952, has tended to improve the U. K. market. Among the other favourable conditions are mentioned the working off of stocks of poor quality teas in U.K. and the slight easing of the burden of overhead costs of tea gardens by an agreement with labour to convert the food grains concession into a cash wage. Moreover the industry decided to cut production by 8 per cent in 1953. As usual the neglect to develop the internal market in the case of tea, as in a number of commodities like sugar. cloth, etc., always leads to a cut in production, because of the crisis of "over production."[1]

Next to jute and cotton, tea is India's chief foreign exchange earner. In 1950-51 tea exports represented by value 13.1 per cent of India's export trade. The U.K. is the chief importer of tea which is then normally reexported to other foreign countries.

The price of tea at auction sales was six annas per pound in the period between 1901-11. It rose to fifteen annas per pound in 1927-28, fell to five annas in 1932-33, rose to ten annas in 1936-37, and was eleven annas for teas sold with export rights. Soon after the outbreak of the war prices of tea rose, and average auction prices were Re. 1-0-9 and Re. 1 for 1941 and 1942 respectively. Auction sales were suspended from September 1942 till 1947, and the British Ministry of Food made block purchases for Allied and certain neutral countries. Prices paid were the average of 1936-38 plus an allowance to cover a rise in cost of production. The upward trend has continued and the price was Rs. 2-0-9 per pound in 1950-51. There was a fall in prices in 1952, though recently there has been a good recovery.[2]

Coffee

Coffee cultivation is confined to the Indian States of Mysore, Travancore-Cochin, Coorg and part of Madras. Mysore accounts for about 50 per cent of the total acreage. The acreage and production of coffee in India have rapidly increased—the acreage from 186,000 in 1935-39 to 224,000 acres in 1950-51, the production from 36 million lbs. to 50 million lbs. India produces less

1 B. T. Ranadive, "The Crisis of Indian Economy", pp. 66 *et seq.* Owen, op. cit., pp. 176-77.

2 India and Pakistan Year Book, 1952-53, p. 196.

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than 1 per cent of the total world production. In 1951 out of a total world production of 2,300,000 metric tons, Brazil contributed 1,080,000 and Columbia 354,000 tons, whilst India's share was 21,200 metric tons. The fall in prices in the depression period affected the coffee plantations seriously, as the internal consumption did not absorb the entire crop and the producers were compelled to seek Government help. The Indian Coffee Cess Act, 1935, provided for the creation of a fund, and for the levying of a duty of 8 annas per cwt. on all coffee exported to any place beyond the limits of British India. The proceeds were to be spent by a Committee, called the Indian Coffee Board, towards the promotion of cultivation, manufacture and internal consumption of Indian coffee. As an article of export coffee played a substantial part in the pre-war period. The exports amounted to a crore of rupees per year and constituted about 60 per cent of the total production.

During the last ten years, however, internal consumption has increased and limited the exports. As against 9,000 metric tons exported in 1934-38, only 1,000 metric tons were exported in 1951.[1] The implementation of the Plantations Labour Act may increase the cost of production. There is urgent need for applying scientific methods to increase production per acre of coffee, to meet the danger of rising costs.

Rubber

Rubber has a comparatively recent development. Half a century ago, it was a negligible commodity. Before the war of 1914-19, it was a precious commodity quoted at 12sh. 9d. per lb. The plantation industry was in its infancy. The total world output of plantation rubber in 1904 was about fifty tons. Today it occupies a pre-eminent place as an article of international commerce, and is used in a variety of industries all over the world. The production of rubber today is nearly 2 million metric tons. It was 1,905,000 metric tons in 1951. India's production has varied from 10,000 in 1931 to 12,000 in 1940. It has increased from 13,500 metric tons in 1936-38 to 17,800 metric tons in 1951, about 83 per cent of which was produced in Travancore-Cochin. The rest is produced in Madras and Coorg. The internal demand for rubber was about 17,000 tons and is necessitating imports which amounted to about 12 million lbs. in 1950-51. The Indian Rubber Board has been constituted under the Rubber (Production and Marketing) Act of 1947 to register all rubber pro-

1 Year Book of Food and Agricultural Statistics, 1952, Vol. VI, Part 2 (1953) p. 142.

duction and fix prices for the different grades of rubber and also to advise Government on questions regarding the export and import of raw rubber. The Tariff Board carried out an enquiry into the desirability of protection and assistance to the rubber plantation industry in 1951, and reported against the need for protection for the industry. It has already recommended the establishment of an All-India Rubber Research Institute. In view of the key position of rubber in industrial development and defence, and the uncertainties of the international situation, dependence on imports from abroad may not be advisable. The bulk of the rubber plantations are small and less efficiently managed than tea and coffee plantations. The Development Committee for rubber plantations has formulated a fifteen year plan for their rehabilitation and development.[1]

In recent times attempts have been by some countries to produce synthetic rubber. It has been estimated that its production was about 50,000 tons in the U.S.S.R., 20,000 tons in Germany, and 3,000 tons in U.S.A. in 1939. The U.S.A. increased synthetic rubber production to about 12,000 tons in 1941. During recent years there has been tremendous progress in the production of synthetic rubber, mainly due to its importance for war purposes.

Linseed

Linseed has played an important part in India's export. It is one of those crops whose development was determined by the export market, though it has also been accompanied by considerable internal consumption. We reproduce below the area and production figures:—[2]

	Area in 000 acres	Production in 000 tons
1936-39	3,736	428
1947-48	3,977	431
1948-49	3,761	423
1949-50	3,759	411
1950-51	3,447	361
1951-52	3,298	309

In 1951 out of the world total of 2,400,000 metric tons India's share was 314,000 metric tons. The acreage and yield have declined in recent years. The internal demand has increased tremendously, absorbing about 87 per cent of the output in 1950-51. 75 per cent was crushed for oil which is needed as food (30 per cent) and industrial use (70 per cent), specially in the paint industry.

1 The First Five Year Plan, p. 160.
2 India, 1953.

The Indian seed is stated to be superior in its oil content. The largest acreage under linseed in India is to be found in Madhya Pradesh. Linseed furnishes one of the many examples, which illustrate the incapacity of this country to take full advantage of a constantly expanding export market.

In the period before 1914, the total world exports of linseed amounted to 1.4 million tons, of which Argentina exported 676,000 and India 367,000 tons. The world exports of linseed since that period increased by 50 per cent but Argentina captured the entire increase, and in 1931 India's share was only five per cent of the total exports as against 85 per cent of Argentina. Things improved a little after 1932, mainly due to the failure of the linseed crop in Argentina for three successive years. The recovery of her position was the result of Argentina's weakness rather than India's strength.

During recent years the export of linseed oil has increased, while that of linseed cakes has decreased. Linseed exports have declined from 71,660 tons valued at 456 lakhs of rupees in 1949-50 to 7,284 tons in 1951-52, valued at 70 lakhs, while exports of oil have increased from 7,298 tons valued at Rs. 128 lakhs in 1949-50 to 25,025 tons valued at 567 lakhs of rupees in 1951-52.[1] India was the fourth largest exporter of linseed oil in the world, after Argentina, Belgium, Luxembourg and Uruguay. Lack of proper marketing conditions was said to fetch lower prices for Indian exports. In view of decreasing acreage and production and increasing home consumption, the exports are likely to decrease. The Harcourt Butler Technological Institution at Kanpur has been conducting a number of experiments mainly directed to extracting and utilising fibre from linseed straw and undertaking research into the diseases affecting linseed.

Groundnuts

Till the early years of the present century, the exports of groundnuts from India amounted to only 1,500 tons a year. The area under groundnuts was also restricted to about 250,000 acres in Madras and 160,000 in Bombay. The demand for Indian groundnuts in Europe was very small, until seeds with higher oil content were introduced, and this was the beginning of the expanding cultivation which has now reached over 11,000,000 acres producing and more than 3,000,000 tons. India is the largest producer of groundnuts in the world. The chief centres of production are Madras, Bombay, Hyderabad and Saurashtra States.

1 Owen, op. cit., p. 173.

The following table shows the variations in acreage and production:—[1]

	Groundnuts (nuts in shell) Area in 000 acres	Production in 000 tons
1936-39	8,022	3,145
1947-48	10,079	3,411
1948-49	9,165	2,901
1949-50	9,832	3,379
1950-51	11,130	3,437
1951-52	11,755	3,037

Variations in acreage have been ascribed to price fluctuations and climatic conditions. The latter caused a decline in production despite increase in area. The greater part of the production has an internal market and roughly only a quarter of our annual production is exported. France has been the most important consumer for our production. There was a steady growth in our exports from 500,000 tons in 1934-35 to 835,000 tons to 1938-39. In recent years, however, there has been a great decline in exports from 126,016 tons in 1949-50 valued at 904 lakhs of rupees to 19,744 tons in 1951-52 valued at 235 lakhs of rupees, the chief importing countries being Switzerland, Italy and U. K.

With the growth of the crushing industry the exports of groundnuts have declined and those of groundnut oil have increased. But the increasing home consumption limits the quantities available for exports. It has been calculated that the total production of kernels (at the rate of 70 tons of kernel for 100 tons of groundnuts) was 2,128,000 tons in 1951-52 out of which 1,709,000 tons was crushed for oil extraction. At the rate of 40 tons yield of oil per 100 tons of kernal, the total amount of oil produced in 1951-52 was about 683,000 tons, 513,000 tons being utilised for cooking, 150,000 tons for vanaspati manufacturing, the rest 20,000 tons being exported. There was a record export of groundnut oil in 1950-51, due to high prices as a result of the Korean war. The exports amounted to nearly 20 million gallons valued at 17 crores of rupees. The Government policy is to restrict exports of unprocessed products, and allow only processed products to be exported. India exported about 5,000,000 gallons of groundnut oil in 1951-52 valued at 4.32 crores of rupees, the chief customers being, Burma and Canada. Due to high prices and increasing adulteration of sesamum oil, the use of groundnut oil for cooking has increased tremendously in India during recent years.

1 India, 1953, op. cit.

Sesamum

Sesamum is an important crop in the country, ranking next to groundnuts in the area over which it is grown. India is the largest producer of sesamum in the world, her share being 32 per cent of the world output. The Indian acreage under sesamum increased from 4,068,000 acres in 1936-39 to 5,731,000 in 1951-52. Madras and Uttar Pradesh are the main centres of production. The following figures reveal the relative growth in acreage and production of sesamum in India:—[1]

	Area in 000 acres	Production in 000 tons
1936-39	4,068	392
1947-48	3,980	351
1948-49	4,644	335
1949-50	5,055	431
1950-51	5,629	453
1951-52	5,731	441

The growing export trade has been gradually declining, mainly due to the substitution of other vegetable oils like groundnut and cocoanut. But while the export of seeds declined, there was a steady growth in the export of sesamum oil from 62,000 gallons in 1926-27 to 252,000 gallons in 1937-38. In recent years the internal consumption has increased to an extent that has made exports negligible.

Rape and Mustard

The total area under rape and mustard was 5.7 million acres in 1951-52, the total yield being 900,000 tons. Uttar Pradesh accounted for more than 50 per cent, other States being Bihar, Punjab, Assam and Rajasthan. Undivided India exported 22,000 tons of rape and mustard seeds in 1939-40. The export today is negligible. Export of rape and mustard oil was 60,503 gallons in 1949-50, valued at 5.8 lakhs of rupees, but declined to 36,369 gallons in 1951-52 valued at 4.5 lakhs of rupees.[2]

Cotton Seed

As India is one of the largest producers of cotton, she has a large production of cotton seed. The greater part of the cotton seed is used as fodder for cattle in the country itself. Very little of this cotton seed is processed and thus a potential industry tends to be neglected. The production has been estimated at 1.1 million metric tons for 1951. A scheme for developing the use of cotton seed for the production of more oil for industry and more cotton cake as cattle feed is under consideration of Government.

1 India, 1953, op. cit.
2 Owen, op. cit. p. 174.

Fruits and Vegetables

India with its diversities of climates and soils is pre-eminently well placed for the growth of a large variety of vegetables and fruits. Very little has been done so far, however, for improving production on scientific lines. According to Dr. Burns a rough estimate of the area covered by fruit trees was 2½ million acres, and that covered by vegetables 700,000 acres in undivided India. The continuing shortage of food in India during the last ten years has led to an increasing propaganda for extending the growth of vegetables. The regions producing fruits are the Kangra and Kulu Valleys, South Kashmir, the Hill Districts of Assam, the Konkan and the Nilgiri Hills. The selection of the actual varieties of the fruits is governed by their cropping power, ability to travel long distances in good condition and the length of the fruiting season. In the uplands of North India all the ordinary European varieties can be grown, while the plains and South India are favourable to the growth of tropical fruits. The valleys of Kulu and Kangra are well known for pears, walnuts and peaches. Orange is grown largely in Assam, Nagpur and Poona. The mango is grown extensively wherever the rainfall is liberal and the climate humid. The expansion of fruit-growing is restricted by primitive methods of transport and marketing. Centres like the Kulu and Kangra Valley and the Assam Hills are inaccessible regions, where the only method of carrying is on head loads or on pack mules. The fruits are picked when green and unripe, and packed in old *deodar* wood boxes or wicker baskets with grass and leaves, which bring on fermentation, so that before the fruit reaches the railway van, decay usually sets in. The commercial aspects of horticulture have received scant attention. If cold storage depots and ice-cooled vans are made available, the cultivation of fruits will have a great future in the home market.

The present availability of fruits and vegetables is estimated at 1.5 and 1.3 ounces per adult per day respectively, as against the requirements of a balanced diet at 3 ozs. of fruits and 10 ozs. of vegetables.[1] Along with milk these are the protective foods whose cultivation needs to be tremendously augmented for adequate nutrition.

Fisheries

A consideration of our food resources would be incomplete without a brief reference to our fisheries. Fisheries contribute

1 The First Five Year Plan, p. 158.

annually about Rs. 10 crores to the national income. Rich in proteins, vitamins and mineral salts, they constitute a valuable protective food. The present production is about a million tons, 70 per cent being sea fish and 30 per cent fresh water fish. The production figures for a long period are not available; there is wide variation in the catch from year to year, but an increasing trend in production.[1] As regards inland fisheries only a fraction of the water area of 15 million acres under rivers, canals and tanks has been utilised. India's coastline offers considerable scope for the development of sea fisheries. Only a small portion of sea water resources is being exploited at present, due to the small country craft which cannot operate beyond a few miles from the shore, and to the absence of harbour and landing facilities. While the Planning Commission do not visualise a separate organisation for the development of fisheries, they recommend mechanisation of country craft and introduction of new mechanised boats, charting for deep sea fishing, provision of training facilities and efficient marketing. The Government of India are arranging to get the services of experts through the F.A.O. and under the Point Four Programme. The Plan provides for a total expenditure of Rs. 4.6 crores, and it is expected that the production will increase from one million tons to a million and half tons at the end of the Plan.

CHAPTER IX

OUR AGRICULTURAL PROBLEM

Soil Deterioration

Our study of the main agricultural crops in the light of the statistics that we have given raises a very grave question for our agricultural economy, namely, is the soil of India getting exhausted. This is a question that has been frequently asked in our times. It was raised in 1893 by Voelcker, who said that positive evidence of soil exhaustion was not readily available. He, however, drew attention to the general belief entertained even in his times by Settlement Officers throughout the country that the soil was becoming less productive, a belief that made him conclude that they were more than merely casual observations. Thirty-five years later, the Agricultural Commission addressed themselves to the same question in their Report, whether agricultural land was "suffering a growing diminution in its capacity to

1 *Ibid*, Ch. XXIII.

yield crops", due to the removal year by year of more of the substances essential to the growth of crops than are replaced by nature or the cultivator. The Agricultural Commission could obtain no evidence of progressive soil deterioration. They observed: "Such experimental data as are at our disposal support the view, that, when land is cropped year by year, and when the crop is removed and no manure is added, a stabilized condition is reached. . . . While the paucity of records throughout India over any long period of time makes the matter impossible of exact proof, we are of opinion that the strong presumption is that an overwhelming proportion of the agricultural lands of India long ago reached the condition to which experimental data point. A balance has been established, and no further deterioration is likely to take place under existing conditions of cultivation."[1]

On the other hand, the Bengal Provincial Banking Enquiry Committee observed in 1930: "The fertility of the agricultural land is deteriorating steadily on account of the absence of manure. The yield of the different crops has become less and less." In support of this assertion, they give us the following table :—[2]

Average Yied in lbs. per acre in Bengal

Quinquennium ending		Wheat	Winter Rice	Gram	Rape and Mustard
1906-07	..	801	1,234	881	492
1911-12	..	861	983	881	492
1916-17	..	698	1,036	867	460
1921-22	..	688	1,029	826	485
1926-27	..	721	1,022	811	483
Decrease in 20 years		**80**	**212**	**70**	**9**

Dr. Radhakamal Mukerjee tells us that in the United Provinces wheat yields show a tendency to decrease since historical times and gives us the following table:—[3]

	Average yield of wheat per acre in lbs.	Source of Information
Akbar's times	1,555	Ain-i-Akbari
1827-40	1,000 (irrigated) 620 (non-irrigated)	Thornton's Settlement Report of Muzaffarnagar
1917-21	1,280 (irrigated) 840 (non-irrigated)	Later Settlement Report of Muzaffarnagar
1931	1,000 (irrigated) 900 (average)	Average yield of crops in India (quinquennial report)

Dr. Mukerjee also calls attention to the disproportionately large increase in the mean density of newer districts as com-

1 Agricultural Commission Report, p. 76.

2 Report of the Bengal Provincial Banking Enquiry Committee, pp. 21-22.

3 "India Analysed," Vol. III, 1934, p. 169.

pared with a decline in density of older districts like Benares, Azamgarh and Jaunpur.

District			Mean Density			
	1881	1891	1901	1911	1921	1931
Gorakhpur	574	657	649	707	722	787
Basti	582	637	659	653	687	737
Benares	885	914	875	890	899	930
Azamgarh	733	790	700	675	691	710
Jaunpur	780	816	776	746	745	797

If the last three districts show a decline in density from 1891 "in spite of a steady extension in the total area cropped, and an extension of well irrigation which in years of draught have reached the phenomenal figures of 95, 93 and 82 per cent, respectively, of the estimated irrigable area—does it not support the inference that, due to the enormous pressure of population on the land, man's efforts are here showing a diminishing return, and population is reaching a setback?"[1]

A note by the Indian Council of Agricultural Research submitted at the eighth meeting of the Council at Patiala in March 1950 states that the average yield of the major food crops in India are not only the lowest in the World but that "the unsatisfactory position is further accentuated by the fact that the yields have been progressively declining from year to year." The note is accompanied by a table which we quote below:[2]

	1936-39 (Average)	1945-46	1948-49
Rice	793	703	699
Wheat	618	541	573
Gram	543	463	519
Jowar	435	322	303
Maize	659	594	529

The soil in India is not naturally poor but has become poor. It has also been suggested that the humus called the 'Reserve Bank of the Soil', is getting depleted in our country and that it is necessary to guard against such a process. When the process of depletion continues over a long period, "the result is disease as is shown in the 'dust bowls' of Western America and the Deserts of Mesopotamia."[3]

1 *Ibid*, p. 184.

2 Proceedings of the Eighth Meeting of the Crops and Soils Wing of the Board of Agriculture (Simla, 1952), pp. 81-83. Cf. "Since 1910 the average yield of rice has fallen from 10.1 to 8.8 quintals per hectare, while in the same period through the systematic efforts of the Government the yield in Japan has increased from 22.8 to 27.1 quintals." (Sir John Boyd Orr, "The White Man's Dilemma" 1953, p. 69.) Sir John ascribes this deterioration of land to lack of humus and fertilisers and the practice of using cow dung as fuel "characteristic of the last stages of soil exhaustion."

3 Fowler. "India's Millions and the Food Cycle in India," *Indian Farming* Vol. II, 1941, p. 615.

An Irrigation Department Committee in Bengal state that deterioration of land has already proceeded so far that it cannot be checked and that "the tract is doomed to revert gradually to swamp and jungle."[1] "The agricultural shrinkage in Central and Western Bengal has been unprecedented in its magnitude and rapidity. About half the cultivated area has ceased to be ploughed in Burdwan and Hooghly, and still the area is shrinking."[2]

Writing about Bengal, Radhakamal Mukerjee observes: "In another part of the valley not merely did science bring little aid to man in obtaining his livelihood from the soil, but the unscientific handling of water and drainage problems has contributed to an agricultural decadence almost unprecedented in the world. "There are parts of Bengal," wrote Ditcher in the *Capital*, "which the Government of India found a garden and left a desert—and Bengal as an administrative and economic unit, never recovered from the grave economic injury thus inflicted."[3]

Similarly in the Punjab Dr. Lander, Agricultural Chemist to the Government of the Punjab, remarked that a considerable amount of land in the Punjab had gone out of cultivation and a great deal more was going out of cultivation on account of Kalar.[4]

Writing in 1937 with reference to land under rice, Sir John Russell left the question open for further enquiry. "The acreage under rice is apparently declining....I was on several occasions informed that the yields are declining. No good figures seem to be available, but if further enquiry indicated any basis for the belief, it would be desirable for the Council to arrange for sample surveys to be taken in a region, where the decline is said to be going on in order to obtain definite information on the matter."[5]

Forty-five years after Voelcker had stressed the desirability of obtaining accurate data on the question of soil deterioration, officers of the Government of India still continued dilating on the importance of obtaining "definite information." The Planning Commission adds its own voice to the chorus. The official yield estimates "which are based on normal yield and condition factor suffer from the defect of being subjective." The new era of Independence has brought into operation another factor that makes for unreliability, and that is, in the polite language

1 Quoted in "India Analysed," Vol. III, op. cit., p. 196.

2 *Ibid.*, p. 197.

3 *Ibid.*, p. 195.

4 Proceedings of the 2nd Meeting of the Crops and Soils Wing of the Board of Agriculture, p. 43.

5 Op. cit. p. 24.

of the Planning Commission, "caution on the part of State Governments in reporting their surpluses and deficits from year to year for the purpose of the Basic Plan for food." "In bad seasons there is a distinct tendency to underestimate production."[1]

The variation in yield per acre of some of the principal crops as seen from the following table of index numbers appears to lend support to the view that the soil in India is deteriorating:—[2]

Numbers of Growth in Acreage and Yield (1913-14 = 100)
British India

Year	Rice		Wheat		Rape & Mustard		Groundnut		Cotton	
	Acreage	Yield	Acreage	Yield	Acreage	Yield	Acreage	Yield	Acreage	Yield
1927-28	109	97	116	91	99.8	81	338	390	102	113
1939-40	121	106	123	99	103	107	577	489	88	95
1940-41	120	103	126	86	104	105	617	578	97	115

The following table throws light on the relative fluctuations in growth in acreage compared with the growth in production in the Indian Union during three years ending 1951-52:[3]

Index numbers of growth in acreage and production in 1951-52
1949-50 = 100

	Acreage	Production
Rice	97.5	88.7
Wheat	94.5	90.3
Bajra	95.7	77.3
Cotton	124.3	113.9
Jute	140.4	145,0
Oil Seeds	112.2	93.2

The Planning Commission observe that for the three years ending 1949-50 compared to the period immediately preceding the war, while the area under cereals has not changed appreciably, there has been a decline in the yield per acre from 619 lbs. to 565 lbs.[4]

Now we are aware that part of the decline in yield as compared with the increase in acreage may be due to inferior land brought under cultivation. It may also be that the growth of population may have led to a diminution in the number and extent of periodic fallow, and thus to an increase in the area cultivated in relation to the available supplies of manure. This would obviously result in deterioration in soil.

The question of soil deterioration can also be approached from a different point of view. The lack of statistical evidence in relation to specific areas does not preclude the possibility of

1 The First Five Year Plan, pp. 155-6.
2 Based on Estimates of Area and Yield of Principal Crops in India.
3 Calculated on the basis of figures given by Owen, op. cit., p. 158.
4 Op. cit. p. 155.

soil deterioration in India. As more and more land is brought under cultivation, the manure supply which is limited and insufficient has to be spread over larger tracts. It is a truism in agriculture that what is removed from the soil in the form of crops must be restored to it in some other form; for continuous cropping without manure will impoverish even the richest soils. It is equally a truism that the heavier the crop raised, the greater the need of restoring to the land its fertility by manures or by devices such as rotation of crops. We in India have been exporting our crops whether cotton, jute, oilseeds, wheat or groundnuts, all of which remove a large proportion of the soil constituents. What do we restore to the soil? Our important source of natural manure—cow-dung—has been diverted to other purposes. We are not using fish or bone manuring due to prejudices. We use leaves and stalks undoubtedly, but it is a small portion of the soil constituents that is thus restored to the land. We are exporting not only our crops but our sources of manure in the shape of bone meal, oil seeds and oil cakes. "A country that exports both crops and manure must be declining in fertility." This was said sixty years ago, and the history of our export trade continues to manifest the same trend in the last sixty years.

It has been said, on the other hand, that the soil in India still responds to improved methods and proper manuring, that within the next two or three decades the outturn of the cropped area may be increased by as much as 30 per cent.[1] The six Indian scientists who visited Britain in 1944 expressed the opinion that, with proper administration and enough fertilisers, India's agricultural crop could be doubled in ten years.[2] It is safer perhaps to suggest that the old agricultural practices "have established a working equilibrium between yield and soil recuperative capacity."[3] Writing a note for discussion before the Third Meeting of the Crops and Soils Wing of the Board of Agriculture held in December, 1939, Rao Bahadur Bal, Agricultural Chemist to Government, C.P. and Berar, observed that, in the case of Indian soils which have been under cultivation for many centuries, the history of crop yields does not indicate any progressive decline in the yield per acre during the period 1900-1922. He illustrated this view by a comparative table showing the yields of wheat in respect of Canada (comparatively recently cultivated soil) and India (soils under cultivation over a period of centuries) :—

1 Proceedings of the 17th Indian Science Congress, p. 34.
2 *Times of India*, 9th November, 1944.
3 R. Mukerjee, op. cit. p. 172.

Year		Wheat Bushels per acre Canada	India
1895	.. ..	—	9.6
1900	.. ..	—	10.5
1905	.. ..	—	11.9
1910	.. ..	18.9	11.6
1915	.. ..	19.1	11.4
1920	.. ..	13.2	11.5
1922	.. ..	15.4	11.8

The soils in India, observed Dr. Bal, appear to have reached a stationary state. This has also been found to hold good in the case of various European countries possessing soils which have been cultivated for many centuries. Dr. Bal contended that this was borne out in respect of other crops also. "It has been shown," he said, "that soils of our province have now reached a stationary state of fertility at a low yield level, as a result of cultivation over many centuries, without adequate returns of organic matter and phosphates and due to the lack of proper soil management in certain important directions." He, therefore, suggested that the problem before us was not one of preventing any further deterioration of soil fertility, but was one of finding ways of improving the soils which have more or less reached a minimum stage of fertility.

The Planning Commission refer to the study undertaken by the Ministry of Food and Agriculture to determine trends over the last forty years, according to which "in no State do all the crops show a consistent decline in yield." The study concludes that there is little ground for the belief that there has been a deterioration in soil fertility or in the standard of husbandry in recent years.[1] The Draft Report[2] admitted that the increase in area was not reflected in a corresponding increase in production, while in the Five Year Plan the Planning Commission hesitate to arrive at any conclusion regarding yield trends on the basis of available data.[3]

1 The First Five Year Plan, p. 156.

2 p. 12.

3 We may not draw a definite conclusion from the following figures supplied by the Government of India (India, 1953), but the figures require consideration:

Yield per Acre of Principal Crops for the Years 1947-52.

	(Average) 1936-39	1947-48	1948-49	1949-50	1950-51	1951-52
Rice (Cleaned)	809	739	698	688	598	632
Jowar	437	369	305	338	315	322
Bajra	351	303	246	273	256	221
Maize	683	640	551	559	489	548
Ragi	696	633	613	625	579	494
Small Millets	414	418	344	375	340	362
Wheat	623	599	566	584	592	556
Barley	755	781	641	631	681	613
Gram	518	522	496	401	430	423
Groundnut	878	758	709	770	692	579
Linseed	257	243	252	245	235	210

In a world short of food the question of increasing the output per unit area and, therefore, of measuring agricultural productivity has acquired increasing importance. Dr. Dudley Stamp in a recent work has endeavoured to apply Kendall's method of measuring crop productivity per unit area to twenty selected countries in determining acre yields of nine crops. The countries selected include the U.S.A., U.K., France, Netherlands, Japan and India. Crop productivity being the result partly of natural advantages of soil and climate, partly farming efficiency, Dr. Stamp points out in a table that India stands at the bottom beccause its advantages of climate have been offset by inefficient farming methods.[1] But he adds a note of warning. Is high output per unit area to be regarded as an essential index of agricultural efficiency? The present world output can be maintained, it is suggested, with a smaller labour force. In a country like the U.S. where land is abundant and labour scarce such a view point is natural. But with economy in manpower in thickly populated countries like India, where land is scarce and labour abundant, the result of increasing efficiency in labour would only aggravate the unemployment problem.

Even if there has been no deterioration in the land so far, what about the future? With an increasing population will the soil continue to meet our future demands? Are we conscious of the vital necessity of conserving the constituents of the soil, its potential fertility, in view of our growing population? The law, that we shall receive only as we are ready to give, holds good in the field of agricultural production as much as it does in human relationships. In agriculture, we are almost living upon our capital resources for the last few decades, and the "grow more food" campaign, of which we have heard so much during the last few years, might have intensified the process through a short term view of our immediate needs.

But with the advances made during the last sixty years in our knowledge of the chemistry and bacteriology of the soil, on the one hand, and of mechanised methods of production, on the other hand, we are told that an enlightened policy of land development may not only prevent any possible further deterioration of the soil, but enable our population to live upon an improved standard with a surplus agricultural production for export. Where losses in soil resources are the result of removal of the crops or leaching by the rains, the

1 "Our Undeveloped World," 1953, pp. 95 *et set.*

losses can be restored and maintained through the mineral and other resources that we command. It has been pointed out that bacteria living on the roots of leguminous plants are constantly adding to the supply of nitrogen in the soil. We have resources in the shape of sulphur and phosphorous amply sufficient for our agricultural needs.

Fertilisers are tending to become cheap; the price of nitrogen, the most expensive of the ingredients in mixed fertilisers seems likely to fall with improvements in the processes of production. Moreover, the holdings which are so obviously uneconomic for the growth of crops like wheat or rice or pulses may be converted into garden land for the cultivation of vegetables and fruits, giving opportunity in turn for the establishment of small-scale rural industries, absorbing some of the landless classes.

We are asked, therefore, not to despair about the future of agricultural development in our country, given the vision to plan and the will to carry out the plan.

The Twofold Character of Our Agricultural Problem

The complexity of the problem of Indian Agriculture has been a matter of frequent observation and comment during the last hundred years. That Indian Agriculture is not primitive, that the Indian cultivator is quite as good as a British or an American farmer are facts to which attention has been repeatedly drawn in the past. It is also recognised that the conditions under which crops are grown in India are frequently remarkably good, and that there are centuries of agricultural experience behind the ryot's art. It has also been observed that it is much easier to indicate possibilities of improvement in English agriculture than to make valuable suggestions for the benefit of Indian farmers, particularly suggestions which have a reasonable chance of being carried out. Thus, Voelcker observed as early as 1893 in his report on agriculture, that if he made any suggestions, he would do this with the feeling that there was much for him to learn, and much that he would never be able to learn from his study of Indian agricultural conditions.[1]

The problem of Indian agriculture is a two-fold problem. In the first place, there are great differences in the agricultural conditions and practices that prevail in different parts of the country, so that while in parts like Gujarat in Bombay the cultivation calls for very little in the way of improvement, there are other parts where there is scope for improvement, as in Madhya

1 Report on the Improvement of Indian Agriculture, p. 12.

Pradesh. In the second place, when we compare the agricultural productivity of India with that in other countries, we notice that land in India in a number of crops yields on an average much less than in other parts of the world. If the problem of Indian agriculturist is two-fold, the approach to its solution likewise has to be two-fold: (1) There is the question of making the best of the present methods of agriculture, teaching the cultivators the utility of such measures as are immediately practicable. (2) There is the bigger question of bringing about a radical transformation of methods by the adoption of large scale agriculture with scientific appliances, a question which in turn presupposes a radical transformation of the present social and economic structure.

Differences in Agricultural Conditions in India

The wide fluctuations in yields per acre of different kinds of crop are illustrated by the following table:—[1]

	All India Average	Madras	Bombay	M.P.	Bihar	U.P.	W.B.	Punjab
Wheat	628	—	382	399	827	757	565	804
Rice	748	1023	887	596	671	592	830	565
Maize	724	778	631	996	636	800	721	780
Jowar	438	541	341	498	562	481	707	190
Gram	555	431	331	385	717	626	594	430

It appears, thus, that whereas the rice yield per acre in Madras is 1,023 lbs. it is 565 and 592 in Punjab and U.P. respectively. In the case of wheat the yield per acre in M.P. is less than half that of Bihar, although the area under wheat in M.P. is twice that in Bihar. This wide range of variation in yields, even taking into account the differences in soil, climate, rainfall, etc., in different provinces, cannot be easily explained. What is still more difficult to understand is the enormous variation in the yield per acre from year to year in the same province, if we can rely upon the statistics supplied in Government publications. One feels tempted to observe that no conclusions of any value can be based upon such unsatisfactory returns as those to be found in official statistics, based upon an average estimate of the yield of land of different qualities arrived at on hypothetical grounds by the Agricultural Department.[2]

1 Proceedings of Eight Meeting of Crops and Soils Wing of the Board of Agriculture in India, p. 83, (1952).

2 Cf. "Whilst, in the provinces where settlements are temporary, the figures for area are considered to be fairly accurate, the same standard of accuracy is far from the case in the permanently settled provinces where figures of areas are often largely conjectural. Again the production calculations are made from standard yields, which are prepared quinquennially, usually on the basis of crop cutting experiments carried out by the different provinces. Experience has proved conclusively that the figures produced by these crop cutting experiments

Low Agricultural Productivity

Turning, in the next place, to a comparison between the yield per acre of different kinds of crops in India and the yield per acre of the same crops in other countries, it may be observed that our agricultural productivity can best be compared with that of countries like China and Japan, where the methods of cultivation have been handed down as in India from generation to generation for centuries. It is also useful to compare our productivity with that of countries like the U.S.A., which enjoy the advantages of large-scale scientific agriculture and which contribute a substantial share to the world's agricultural production. The following tables give us a comparative view of the agricultural productivity in different countries:—

Crop yield in bushels per acre of a few crops[1] (A bushel=60 lbs.)
1951

	Wheat	Maize	Rice	Barley
Italy	21.6	30.7	52.9	17
U.S.A.	16.2	34	28.2	23
India	10.3	8.4	12.9	12
Canada	22	49.2	—	—
Egypt	28.5	31.2	—	—
China	14.5	19.5	28.4[2]	17
World Average	17.2	23.7	18.1	20

Yield in quintals (220.46 lbs.) per hectare (2.47 acres) for 1946 [3]

Country	Rice	Wheat	Barley	Maize	Potato
Italy	41.7	13.3	9.7	15.1	58
Spain	42.2	9.6	12.9	14.3	64
Argentina	33.9	10.0	11.9	22.3	52
Japan	36.9	9.7	10.7	12.5	91
India	12.3	6.0	7.9	6.2	12.3
World Average	16.7	10.3	11.1	15.2	12.3

are very unreliable." W. Burns, "Technological Possibilities of Agricultural Development in India," 1944, p. III.

The Planning Commission express the hope that the new procedure for estimating production based on the technique of random sampling introduced for some crops by the Indian Council of Agricultural Research since 1944 will produce more reliable figures for long term trends after accumulating data for several years. The Commission give a high priority to the adoption of the technique of random sample surveys for estimates of production. We are afraid, however, the personnel of trained workers who are to do the survey may prove as unsatisfactory as the revenue officers whose estimates are regarded as unreliable.

Cf. also: "Production figures can only be estimated by application to figures of areas sown of a notional figure for yield based on an average determined by crop cutting experiments........Moreover, the figures for the whole of India are so large that even a small margin of error may well account over the whole area of food supply, for several million tons. Again it is impossible, in relation to figures for the whole of the country, to draw any general conclusions about trends of production, because of the catastrophic effect of climatic conditions in one area or another. The effect of good rains in many areas is cancelled by subsequent floods.........To compare production figures with areas sown and draw the conclusion that there has been any decline or increase in fertility or productivity is, in the light of all the above considerations, a profitless exercise." Rowland Owen, op. cit. p. 157.

1 Summarised from Table VII pp. 80-83, Dudley Stamp, op. cit.

2 The figure is for the average of 1945-47.

3 Summarised from Eighth Meeting of Crops and Soils Wing, op. cit., p. 82, Table I.

We are fully aware that the remarkably low productivity of land in India as compared with other countries is largely due to the differences in agricultural methods and in the stages of development in the economic life of these countries. But the fact that these tables bear out is that land in India, of a given size and for given crop, contributes a yield which is the lowest amongst the countries compared. The question that confronts both the student and the statesman is whether looking to the richness and fertility of the soil in India, the human factor, which has done so much to increase production in other countries, less favourably situated, cannot achieve results equally comparable by bringing the resources of science to bear upon our soil.

Water and Irrigation

In examining the factors that determine the productivity of the soil in India, it will be convenient to consider them according as they relate to (1) the physical environment or to (2) social, economic and political conditions. Taking the physical environment into account so far as it includes factors like climate and soil, these are more or less fixed by geographical conditions. Though even these are modifiable by human efforts, differences in productivity due to such factors cannot be removed in their entirety. There are other factors which are largely modifiable by human agency, and which offer possibilities of improvement both by the transference of local methods and practices from one part of the country to another, and by the introduction of Western methods so far as they can be applied to Indian conditions.

Water is indispensable to cultivation, and in a country like India where dry farming is still carried on in the greater part of the country, an adequate supply of water acquires a greater importance than elsewhere. Owing to the marked divergence in the quantity of rainfall in different parts of the country, no uniform policy can be laid down in general terms for the country as a whole. From the point of view of water facilities, India can be roughly divided into three great areas: (1) Areas where the rainfall is abundant like Assam, and the Western Ghats, and where therefore irrigation is not needed, (2) Areas of uncertain rainfall like the Deccan and Madras. Irrigation is extremely desirable in such regions where the fear of famine is always present, (3) The driest parts of India, like the Punjab and Rajputana where owing to the scanty rainfall irrigation is absolutely necessary.

In 1945 out of a total cultivated area in undivided India of

216 million acres, 58 million acres were irrigated. The Partition of the country in 1947 meant the inclusion of large parts of the highly developed canal irrigated areas in Western Pakistan. Of the total of 400,000 cusecs of water carried by the canals of undivided India nearly half is carried by canals now in Pakistan, and of the total of 24 million acres of land irrigated by State controlled canals in undivided India, a little more than half now lies in Pakistan. The Planning Commission observe that this has added to the seriousness of the food situation in the Indian Union. With 18 per cent of the population of undivided India, Pakistan has 23 per cent of the total area, 32 per cent of the rice, 35 per cent of the wheat and 25 per cent of all the foodgrains of undivided India. During six years following the war a number of projects—some multipurpose, and others only for irrigation—were taken in hand. The cost of these schemes which were under construction in 1951 would on completion be Rs. 765 crores. A sum of Rs. 153 crores had already been spent on them by the end of March, 1951. The Planning Commission give the highest priority to these projects. These include the Damodar Valley, the Bhakra Nangal and the Hirakud projects. During the five-year period covered by the Plan it was originally proposed to spend Rs. 448 crores, but later Rs. 50 crores more were allocated to the schemes. These projects are calculated to irrigate an additional area of 8.5 million acres in the last year of the Plan, in addition to generating 1.08 kilowatts of additional power. After the completion and full development of these projects the total addition to the area irrigated will be 16.9 million acres and to power 1.4 kilowatts. In addition there are a large number of minor irrigation works estimated to cost Rs. 47 crores during the period of the Plan.

As for power generation most of the electrical development in India has so far been limited to satisfying the demand of urban areas for power for industrial purposes. Over 60 per cent of the electrical energy produced by public supply undertakings throughout India is absorbed in the cities of Bombay, Calcutta, Madras, Ahmedabad, Kanpur and Delhi, which contain less than 3 per cent of the population of the whole country. Another 7 per cent is used by the Railways. Some 130 million kWh are used for irrigation water pumping in the States of Madras, U.P., Mysore and Travancore-Cochin. Out of 560,000 villages, about 2,800, that is, not more than 0.5 per cent had been electrified by the end of 1950.

Value of Irrigation

The value of irrigation projects may be considered from three different points of view. They may be undertaken for the satisfaction of local needs; or secondly, for the raising of cash crops for export; and, thirdly, for the maintenancce of live-stock industry. In India with a population sunk in poverty and unable to afford even the construction of wells by their own resources, dependent moreover on the rains in considerable parts of the country, the primary task of Government should have been to provide finance to the cultivators for digging wells and building tanks for the storage of water, needed by a population, constantly threatened with scarcity and famines. Statesmanship would have suggested a policy of State expenditure by way of advances to the cultivators, or a comprehensive programme of well and tank construction directly by the State for meeting these requirements. But even as late as 1928, the Agricultural Commission gave their solemn sanction to the *laissez-faire* view that "the construction of wells is essentially a matter for private enterprise." The development of irrigation works in India by Government was directed to the construction of canals, which would promote the cultivation of cash crops like cotton and wheat. Canals were always held to be of greater importance than tanks and wells and they yielded a net seven per cent interest on capital outlay. The successors of the East India Company found it difficult to shuffle off the commercial traditions of the Company when they entered upon the responsible work of looking after the welfare of the millions, who were entrusted to their charge by the accident of history.

There has been no thought in this country of utilising irrigation works for the maintenance of live-stock industry. The industry, if any, is purely self-subsistent; thus our country cannot afford the luxury of the meadows of Provencal Plains and the Mountain Valleys of Europe nor the grasses of Western North America. It was in 1903 that the Irrigation Commission made a comprehensive report. Recognising the importance of irrigation to India, it laid down a policy of development which subsequently brought about 25 million acres under canal irrigation in undivided India; but deficient drainage has led to water-logging, and underground water has brought deposits of mineral matter to the surface, forming infertile salt tracts.

When works assuring perennial irrigation are imposed upon a densely populated country, the absence of fallow causes soil

exhaustion; and this may possibly be remedied by expensive manuring. In India this expensive manuring is beyond the reach of the cultivators.

At a time when so much stress is laid on major irrigation works, and when the Planning Commission is proposing to spend over Rs. 500 crores on them—including not only irrigation but power development, an expert committee of FAO for Asia and Far East raises a note of warning. Speaking of irrigation in Pakistan, the F.A.O. Report observes: "Perhaps the most serious problem of water logging and salinity in the world is to be found in the Punjab and Sind as a result of long continuing and extensive irrigation combined with inadequate irrigation and drainage practices. A total of 1.8 million hectares, or 21 per cent of the cultivated area of the two provinces, has been found by field survey to be suffering from surface damage in excess of 20 per cent of the area through excess salinity, and of this area 240,000 hectares have gone entirely out of cultivation. It has also been estimated that in the Punjab alone another 2.85 million hectares contained salt on less than 20 per cent of the surface. Waterlogging affects or threatens to affect about 37 per cent of the cultivated area in both the Punjab and Sind, with 2.7 million hectares, having water at between 5 and 10 feet below the surface....The level of the water table and the increasing salinity has resulted in land being taken out of cultivation at an estimated rate of from 4,000 to 8,000 hectares a year."[1]

The Planning Commission under the glamour of achieving immediate results by the expenditure of hundreds of crores on big irrigation and power projects make no lengthy reference, nor do they attach considerable importance, to well irrigation and irrigation by tanks. The Irrigation Commission of 1901-03 observed that "there is no single province in which this form of irrigation might not be very largely extended with advantage... In some districts abundantly equipped, wells are so essential to successful cultivation, and to the maintenance of a dense population, that endeavours to multiply them should be maintained and sustained until the very maximum numbers have been reached which can profitably be employed. There are also tracts in which water lies so close to the surface that canal irrigation may not only be unnecessary but actually harmful, but in which, nevertheless, irrigation of some kind is urgently required."[2]

1 "Agriculture in Asia and the Far East" (F.A.O. Rome) Oct. 1953 p. 73.

2 Quoted in Famine Enquiry Commission Report, 1945, p. 135. Of late more attention is being devoted to minor irrigation works with a view to combat increasing unemployment.

The Famine Inquiry Commission, 1945, endorsed the urgency of measures for the development of well irrigation by Government assistance in the shape of loans and grants and technical advice for sinking of wells. The Commission also stressed the necessity of improving and constructing tanks and sinking tube wells. The Planning Commission includes a minor irrigation programme for the States and makes a provision of Rs. 77 crores for the five year period. This programme includes provision for wells and tube wells, improvement and construction of tanks as well as dams and channels

Manure

The question of manure is a question of the highest importance for the improvement of agriculture. It is another modifiable factor where human effort and intelligence play a large part in counteracting the operation of environmental conditions. In India, as in other countries, systematic agriculture in earlier days was associated with the application of animal manures to cultivated soil. The realisation of the importance of manuring for agriculture by the ryots is evidenced by a number of proverbs still current among the people.

In the first place, the question of manure is intimately linked up with that of water. The one is necessary to the other. Without the presence of both, the cultivator cannot obtain the best that the soil can yield. "Irrigation," observes the Director of Land Records, Bombay, "cannot be carried beyond the limits which the supply of available manure fixes." It is a common saying that, if you give a ryot water and manure, he will grow a crop even upon stones. The cultivator is fully aware of the value of manuring. If, nevertheless, he burns the cow-dung which he collects, he has to do this as a matter of sheer necessity, because he has nothing else which he could use as fuel, and not because he is ignorant of the value of cow-dung. Moreover, he knows when to use, and for which crop to use, the manure at his disposal. He knows that he has got to use it on wet land where it will easily decompose and not on dry land. He knows the danger of using fresh cow-dung which might attract white ants and destroy his crops.

Cow-dung

The greater part of the soil of India with the exception of silt renewed tracts of Bengal and the black cotton soil requires careful manuring. It is a truism that the supply of manures in the country is notoriously inadequate. Amongst the sources of man-

ure the most important is cattle manure, or farmyard manure as it is called in England. But whilst in England, farmyard manure is supplemented or replaced by artificial fertilisers, in India it has been the only commonly available source of manuring. Writing in 1893, Dr. Voelcker called attention to the regrettable practice common in his days of burning cow-dung as fuel. He demonstrated the richness of the organic matter contained in Indian cattle manure, and exposed the hollowness of the argument that cow-dung when burned does not imply a great agricultural loss. He pointed out that for every ton of cattle manure that is burnt 29.25 lbs. out of a total 30 lbs. of nitrogen are altogether lost. Soils in India are exceedingly poor in vegetable matter, and, in the process of burning, the entire value of the organic or vegetable matter is lost. It has also to be remembered that a considerable quantity of cow-dung is used for plastering walls and floors of houses in the villages or for brick burning near large towns.

Dr. Voelcker called attention to the process of gradual soil exhaustion which would end in a decline of fertility and productive power. He urged upon Government the need for supplying manure to the land. "Of what use will it be to demonstrate at experimental farms the value of manure, and how to preserve it, when the cultivator has to burn it because he has nothing else for fuel? "[1]

One of the recommendations that Dr. Voelcker made was to teach the cultivators the value of the use of litter put under the cattle for the better preservation of manure. He referred to the use of coarse grass, shrubs and weeds which, sprinkled on the floor under the cattle, would retain the urine and double the value of the manure.

Thirty-five years after Dr. Voelcker made his report, the Agricultural Commission tell us : " There has been little advance in regard to the preservation of manure since Dr. Voelcker wrote his report on Indian Agriculture in 1893. The practice of providing

1 Op. cit. pp. 132-33. Cf. "The role of organic matter in the soil is very important. In decomposed state it is colloidal and forms a complex in association with the clay fraction. It improves the physical and chemical properties of the soil, supplies nitrogen to the crop, and above all serves as a buffer in the soil ensuring even distribution of (inorganic) plant nutrients to the roots of crops. It is, therefore, very essential when applying chemical fertilisers. As our country comprises of tropical and sub-tropical regions, the humus in our soils is being constantly burnt away by the scorching heat of the sun. The organic byproducts of most crops, i.e., stalks, leaves, etc., are utilised as cattle feed or thatching material, and are not returned to the soil except in very small proportions. The bulk of the cattle dung produced, equivalent to about 200 million tons of farm yard manure is burnt away due to the shortage of cheap fuel......Green manuring is not possible for want of the availability of water for raising the green manure crops. Poudrette is not used on account of social and religious prejudices. Thus the humus status of the soil has been steadily going down." (Paper read by Capt. V. M. Chavan, Eighth Meeting of the Crops and Soils Wing of the Board of Agriculture, 1952, pp. 98-9.).

litter for cattle is rarely, if ever, adopted except on Government Farms. No efforts are made by the cultivator to preserve cattle urine . . . No attempts are made to preserve the manurial value of the content."[1] The Agricultural Commission expressed the pious hope that "something can be done to promote the better preservation of farmyard manure as is not diverted to consumption as fuel, by using it as a compost with village sweepings." Ten years later, Sir John Russell made the same kind of apologia for Government inaction and lack of active interest, when he observed that the "wasteful practice of making manure into cakes and burning it goes on unabated for the simple reason that no other equally useful fuel is available." "The only way of stopping the practice is to provide an alternative supply of fuel."[2] Sir John Russel dismissed the possibility of villagers using the machine produced hurricane and oil stoves for cooking, and repeated the hundred times sung chorus of the desirability of planting quick growing trees near the village. He repeated, what Dr. Voelcker had so clearly indicated in his report, that as the content of Indian soil in nitrogen and organic carbon averages about 0.05 and 0.06 per cent respectively, there is need for organic manure.[3]

Dr. Bal, Agricultural Chemist to the C.P. Government, in a paper read at a meeting of the Crops and Soils Wing in 1939, stated that decomposition of organic matter is very rapid, when a virgin soil is brought under cultivation, but it ultimately reaches a point where the recuperative and the destructive processes of the soil attain an equilibrium. Most of the Indian soils having been under cultivation over a period of centuries appear to have reached a more or less stationary state in respect of bulky nitrogenous manures like farmyard manure, poudrette and urine earth almost invariably give strikingly increased returns as illustrated by the results of experiments in the following table:—

Crop	Treatment	Average yield in lb. per acre
Cotton	No manure	318
	Farmyard manure 2½ tons per acre	532
Jowar	No manure	680
	Farmyard manure 2½ tons per acre	779
Paddy	No manure	992
	Farmyard manure 4000-8000 lbs. per acre	1,623

1 Report, p. 83.
2 Op. cit. p. 57.
3 See footnote on preceding page.

At the same meeting, the Commissioner of Agriculture, Baroda, observed: "There is no doubt whatsoever that very much more could be made of the live-stock urine than is now the case. This may not add anything in the way of humus, but it certainly adds to the nitrogen. Long continued experiments on *sundhia juar*, wheat and cotton at Nagpur show most conclusively that the effect of the urine carefully conserved in dry earth is exactly equal to the influence on the crop to which it is added, as the cattle-dung of the same pair whose urine has been thus conserved. At the present moment a great deal of this is lost, the floors are hard and impervious, such urine as does sink in is largely confined to one or two spots which get overcharged, and though a certain amount of this is scraped up in the daily removal of solid excreta and a handful or two of fresh earth is added, a great deal of what might be used is lost."[1]

The problem connected with cattle manure stands to-day precisely where it stood 60 years ago. In a country like India, where an increasing population makes an ever increasing demand upon the soil and on the food crops which it can yield, it should have been the primary duty of Government apart from other things to prevent a decline in land yield which it should be interested in increasing. In times of scarcity, due to failure of rain, unmanured land may yield absolutely nothing as compared with manured land. Manuring may thus offer a partial protection which would make all the difference between famine and no-famine. Indifference to the recommendations of its own experts may be tolerated on questions which do not affect the lives of millions. But when it is a question of saving the lives of millions by such readily available measures as planting of trees with the help of the Forest Department for the supply of fuel, and spreading the knowledge of such improvements upon the present methods of using cattle manuring as the villagers can readily grasp and carry out, there can be no excuse for inaction or delay.

Nearly seven years have passed since the advent of independence, and the Planning Commission finds itself only in the initial stages of improving upon the situation. They observe: "On the basis of the 1951 live stock census the total production of fresh dung is estimated at 800 million tons; however, all this valuable

1 The Imperial Council of Agricultural Research have calculated that the amount of cow-dung burnt is about 560 million tons, while Sir H. Howard puts it at 250 million tons per annum. Even taking the lower figure the loss to our agriculture can well be imagined. The fertility of the fields, thus deprived of manure, decrease, and the soil gets more liable to erosion. At 3½ tons per acre per annum, the 250 million tons of cow-dung could adequately manure 72 million acres, that is about 30 p.c. of the cultivated area in India. (Sir Herbert Howard, "Post-War Forest Policy for India," 1944 pp. 26-27).

manure does not go back to the land. A large part of it which may amount to nearly 50 per cent—is used as fuel by cultivators. The dung which is now burnt can be saved for agriculture, if suitable supplies of fuel are made available."[1]

It is gratifying to note that the importance of human excreta and urine as sources of nitrogen, phosphorus and organic matter is being recognised. In urban areas in India night soil is composted with refuse, and the manure sold to the cultivators. Composting is in progress in 1600 towns out of 3000 towns where municipalities and Notified Area Committees are functioning. But the total yield thus obtained is figured out at 1.7 million tons.

The Planning Commission express a hope that in rural areas it is "necessary to devise suitable latrines which villagers can use," and that the cost of construction of these latrines with local materials can be covered by the sale of the manure that will be made available. They also hope that the burning of dung as fuel might be checked by a process, which has passed through laboratory and pilot plant stages, of obtaining fuel gas by fermenting cattle and human wastes.[2]

Green Manuring

Green manuring is the practice of growing crops for the specific purpose of incorporating them into the soil. Turned under, they add organic matter, return to the upper soil plant nutrients taken up by the crop from deeper layers. They improve the structure of the soil, and when legumes are used provide additional nitrogen for succeeding crops. Quick growing crops are preferred for green manuring. In India nitrogen would appear to be the chief need of our soils. Leguminous green manures like sunn hemp, dhaincha and cowpeas have been in use in India for a long period. The use of leguminous green manure crops, it is stated, contributes nitrogen to the soil from 40 to 140 lbs. per acre, depending on soil, climatic conditions and trend of crops, the average being about 80 lbs.[3]

Green manure crops also protect the soil against erosion and conserve the nutrient elements, especially the nitrates, which would otherwise be leached down during the part of the year when no other crops are grown. Moreover, it increases the water

1 First Five Year Plan, p. 255.

2 First Five Year Plan, p. 256. Dr. Burns recommends that, accepting the position that most farm yard manure will still be utilised as fuel, the logical course is to employ a small amount of it as a 'starter' for the making of compost. "If the Chinese cultivator can apply to the land any scrap of available fertilising material, so can the Indian cultivator. It is only a matter of discovering the best way to do it." (Report, p. 121).

3 Eighth Meeting of Crops and Soils Wing, op. cit. p. 230.

holding capacity of a light soil, and transforms the phosphate and potash in the soil into an available form. It also exerts an important influence upon the activities of the beneficial soil micro-organisms and on soil tilth.[1]

The Woodhead Famine Inquiry Commission observe that green manuring has made little progress except in the rice growing areas of the delta of Madras. "One of the chief reasons for the lack of progress is probably to be found in the fact that the small cultivator cannot afford to sacrifice even a catch crop, in order to grow a crop for green manuring. *A priori* it would appear that green manuring will only be successful in places, where there is an abundant supply of water and the pressure of population on the land is not heavy, or the green manure crop fits into, or is a part of, the normal rotation of crops. The question of green manuring requires further investigation and we recommend this be undertaken without delay."[2] The same note of caution is sounded by experts of the Food and Agricultural Organisation. "Although some valuable experimental work has been done on the problem, much remains to be done to obtain a clearer understanding of the tropical conditions under which green manuring can be used to good advantage. High average temperature and seasonal high moisture content of the soil in much of the tropics make for rapid decomposition of organic matter. Stirring the soil further accelerates the process . . . The economics of green manuring must always be considered. Loss of land for economic use during part of the year is a serious difficulty in many circumstances."[3]

Bones and Fish

Bones of dead animals and bone meal are little used in the country, in the first place, because of the ignorance and the age-long prejudice of the people, secondly, because of the absence of accurate information with regard to the use of bones as manure in relation to different types of soil. Further, there is the difficulty of collecting and keeping the bones and of pounding them to powder. Thirty-five years after Dr. Voelcker had called attention to the desirability of experimental investigations into

1 Pusa Bulletin No. 50 of 1915. See also "Green Manuring" by R. D. Rege in *Indian Farming*, Vol. II, p. 521.

2 Report, p. 147.

3 "Efficient Use of Fertilisers" F. A. O. Washington, 1949, pp. 131-133. Cf. First Five Year Plan, "The value of green manuring has been recognised but it has not become a common practice even in the area where adequate rainfall or ample irrigation facilities are available. The pressure of population in such areas is generally so great that the cultivator cannot afford to bury a crop which does not directly bring him any return........Where conditions are favourable the State should take steps to encourage growing of such crops by providing necessary facilities and inducements such as supply of seed and irrigation at the time of sowing, and by offering concessions such as remission of water rate or land revenue." (pp. 256-7).

the value of bones as manure, the Agricultural Commission repeated the same recommendation: "The first essential is to obtain definite data in regard to the price at which, and for the crops for which, the use of bone-meal is advantageous to the cultivator."[1] "Little information is available," said Sir John Russell ten years later, "about the proportions of nitrogen, phosphorus and potassium required for different soils and crops, or the proportions in which the organic manure should be used."[2] Thus, an important part of the fertilisers in the shape of bones and bone meal was lost to India by a failure to apply it to the soil and by export. The average exports of bones from India for the five years ending 1914-15 were 90,000 tons valued at 64 lakhs of Rupees. For the five years ending 1924-25 they were 87,000 tons valued at 96 lakhs.[3]

The average annual collection of bones amounts to about 150,000 tons. "This is only one fourth of the estimated quantity available judging from the number of cattle that die in a year. At present 25 per cent of the bones is converted into bone meal, and the remaining 75 per cent is exported as grist for which there is a considerable demand in foreign countries, as it is a source of glue and gelatine." The export of bone meal is now prohibited and the whole of it is used internally as manure. As regards the export of bones the Planning Commission recommend that steps must be taken to manufacture byproducts, like glue and gelatine, in India. A bone digester lately imported from Japan steams bones under pressure and fats and glue are extracted. The bones, thereafter, become so brittle that they can be crushed in any pounding machine. The bone meal, thus obtained, can be used as manure as well as cattle feed.

As regards fish we only know that in 1939, 4700 tons of fish manure was exported. The Planning Commission make no reference to the possibilities of fish as a manuring agent. The F.A.O. report on Fertilizers makes no mention of fish as a source of manure. The Woodhead Famine Inquiry Commission casually observe that with the development of fish industry in the post-war period the quantity of fish manure should increase considerably. As a source of food scientific calculations indicate that whilst 98 per cent of our daily energy and 94 per cent of our protein intake come from the products of the soil, only 1 or 2 per cent of our daily

1 Report, p. 93.

2 Report, p. 58.

3 "The exports of bones have steadily increased, and between 1884 and 1951 a total of about 4 million tons of bones have been exported." (First Five Year Plan, p. 258). Bone meal as a manure is suitable for all types of soils, particularly acidic soils where superphosphates cannot be used. It helps to increase the phosphorous content of grain and thus enhances its nutritive value.

energy is derived from the fish we eat. Fish as food acquires significance in countries like Siam, Burma and India, as it provides a variety to an otherwise monotonous cereal diet.[1] The Government of India publication, "India, 1953," tells us that out of a total of 14.1 million maunds of fish production only 1.1 million maunds are converted into manure. It is but natural that in a deficit food production country like ours fish production should form part of a Grow More Food Campaign rather than as manure.

Oils Seeds and Cakes

Oil seeds and oil cakes are another important source of manure—particularly the latter. The Agricultural Commission pointed out that of the out-turn of the seed of cotton, groundnut, rape and mustard, linseed and sesamum, the exports amounted to an average of 18 per cent per annum over a period of fifteen years, 1911-25. Elsewhere we have given the figures for the export of linseed and groundnuts. The export of seeds and cakes implies the removal of a considerable amount of the constituents of the soil. If the cattle in India were fed with oil cakes, the manure would be returned to the soil whose fertility might thus be conserved. Apart from the soil, "to send away the entire seed or the refuse after the removal of the oil is to send away the valuable manurial constituents contained in the seed; in brief, to export them is to export the soil's fertility."[2] Before the outbreak of the last world war we exported about 22 per cent of our total production of rape seed, mustard seed, linseed, castor seed and groundnuts, but recently due to home consumption in industries exports have declined.[3] The Woodhead Commission observe that the amount of oil cakes at present consumed as cattle feed is only a fraction of what it should be if the cattle were properly fed and emphasise the desirability of crushing oil seeds in India, instead of exporting them, so that the maximum amount of oil cake may be available for cattle feed and manure.

Chemical Fertilisers

Sir John Russell noted in his report the results of the application of nitrogenous fertilisers to the soil. He admitted, however,

1 Dudley Stamp, op. cit. pp. 100-01.

2 Voelcker, op. cit., p. 106.

3 In a paper submitted to the eighth meeting of the Crops and Soils Wings of the Board of Agriculture, Mr. M. D. Chaturvedi, I. F. S., states that the annual export of 20 per cent of the total yield of the oil seeds, coupled with about 30,000 tons of oil cake means a regular drain on India's manurial resources. (Footnote, p. 103). It may be stated, however, that with strict regulation of exports introduced by the Government of India the export of oil seeds has definitely fallen. The export of linseed and linseed oil has fallen from 78,000 tons in 1949-50 to 32,000 tons in 1951-52, the export of rape seed in 1951-52 was negligible and that of sesamum has totally ceased. Most of the cotton seed is fed whole to cattle.

that the use of artificial fertilisers was limited, and that the relatively small amounts of these fertilisers were taken up almost entirely by tea growers.[1] In a country with an agricultural population which the soil cannot support under present conditions, a population saddled moreover, with a debt which grows with every generation, it would be futile to expect the use of artificial fertilisers on a large scale. The Agricultural Commission in their report pathetically observed with regard to the use of the artificial nitrogenous fertilisers, "While the economics of the industry remain as they stand to-day, we are unable to recommend any further investigation into the subject under Government auspices."[2]

The recent food crisis in India led to an investigation of the food grains policy of the Government, and the Gregory Committee Report recommended the establishment of a fertiliser industry with a capacity of producing 350,000 tons of sulphate of ammonia per annum as a short-term measure. A subsequent expert committee suggested a plan for a single factory for the purpose at an estimated depot cost of 126 Rs. per ton. Preliminary work commenced in 1945 on a site recommended by the Committee, and constructional work followed in 1946. An American company was employed to design the factory, supervise construction and bring it into production and a British firm to procure the plant and machinery. A State-owned company known as Sindri Fertilisers and Chemicals Ltd. was formed in December, 1951, and took over control in January, 1952. Its authorised capital is Rs. 30 crores. Its estimated cost is Rs. 23 crores. The factory is located in Bihar, about 15 miles from Dhunbad; its annual capacity is 350,000 tons of ammonium sulphate. It is the largest plant of its kind in Asia. Six other smaller plants in India have a rated capacity of 80,000 tons per year. India's need of artificial fertilisers as estimated by the Food Policy Committee vastly exceeds the total potential output both of the Sindri factory and of the other producers, keeping in mind that the fertilisers could be supplied to stimulate the growth of non-food crops.

It has been stated that in our country we have very nearly exhausted our resources of additional land capable of being brought under cultivation; our efforts, therefore, are being directed to increase the yield per acre, by improving upon the traditional methods of cultivation. The problem is two fold: firstly that of enabling the soil to maintain its productivity and secondly

1 Op. cit. p. 58.
2 Report, p. 91.

increasing the productivity by intensive methods of cultivation. The soil in India has been found to be deficient in nitrogen, particularly all rice soils. It has been calculated that 20 lbs. of nitrogen per acre[1] would be the minimum required, and the quantities in terms of different manures—both organic and inorganic—for the whole of the rice area alone, would be over 2,500,000 tons of ammonium sulphate, 10 million tons as oil cakes, and 100 million tons as composts.[2]

As against this total requirement we are told that though the potential capacity of farm yard manure is 6 to 8 hundred million tons, over 20 per cent is wasted and over 40 per cent used as fuel. This leaves only 2 to 3 hundred million tons for the soil. Most of this goes to the irrigated areas, which is less than one fourth of the total cultivated land. Including the 20 million tons of composts from the waste of towns and cities and another 80 million tons obtainable from improved methods of production of compost, our total production of composts cannot exceed 4 hundred million out of a requirement of 1000 to 1200 million tons.

Turning to inorganic fertilisers, with a rice area of 60 million acres the fertiliser requirements are computed at 3 million tons, and this does not take into account parts of the country where rainfall is adequate for an efficient use of fertilisers. The Sindri factory has a capacity for 350,000 tons. "For a substantial increase in the yield of food crops production of a million tons of fertilisers in the immediate future should be regarded as a minimum target to aim at."[3]

When advocating the use of artificial fertilisers one has also to remember its limitations. The greatest limiting factor is water. It is well known that crops wither if fertilisers are applied in the absence of abundant water supply. The use of fertilisers has, therefore, to be restricted to irrigated areas and those with an assured rainfall. The application of fertilisers in India is limited to 60 to 70 million acres of the cultivated land. As the maximum production in Indian factories can only supply a fifth or sixth of our needs,

1 When experts differ, what can the poor lay farmer do? In one and the same series of meetings, the nitrogen requirements are placed by another expert at 10 lbs. instead of 20. (Eighth Meeting of Crops and Soils Wing, op. cit. p. 219).

2 *Ibid.*, p. 127. Other experts have put the requirements of ammonium sulphate at 3 to 4 million tons. (Note by the Director of Agriculture, Bombay, p. 214).

3 Ibid, p. 128. Cf. "India's paddy soils respond to nitrogen in any form. The recommended application is about 30 lbs. of nitrogen per acre as ammonium sulphate with a basal dressing of 5000 lbs of green manure." India's requirements for inorganic nitrogen to meet the recommended application would be the staggering total of 5,000,000 tons of ammonium sulphate with a present production of 400,000 tons. It is estimated that much less than 1 per cent of the rice receives fertilisers at present. (Report of tht Second Meeting of the Working Party on Fertilisers, International Rice Commission, F.A.O. Rome, 1953, p. 35).

we shall still have to be dependent on imports from abroad. As the cost of outlay for fertilisers, moreover, will make it impossible for the majority of farmers to make even a beginning in their use, Government will have to subsidise the farmers in this connection.

It has also been pointed out that chemical manures applied continuously "are apt to render crops toxic, due to the deficiency in oxymones, which are derived only from organic manures. Moreover a considerable amount of spade work, in the shape of research, is necessary before any profitable advice can be given to farmers in the use of fertilisers for irrigated areas. For instance, little information is available as to the most suitable time for the application of the fertilisers, about the correct proportions of nitrogen, phosphorous and potasium for different soils and crops, and the proportion in which organic manure should be used along with fertilisers. In fact, considerably more research and experiment are required in regard to the use of fertilisers, before the Agricultural Department will be in a position to give full and satisfactory advice as regards their use."[1]

The Planning Commission observe that both manurial resources of the organic type and chemical fertilisers are necessary for maintaining and increasing soil fertility. " It is well known that a continuous application of chemical fertilisers only without the support of any bulky organic manure, leads in course of years to soil deterioration and progressively lower yields." Moreover " the high prices of fertilisers in recent years have resulted in larger quantities being utilised for commercial crops in preference to food crops. Unless, therefore, the prices of fertilisers are substantially reduced so as to be within the reach of the grower of food grains, any expansion of the use of fertilisers for food crops will be difficult."[2]

If the immediate objective of our food policy is to increase the production of food, one might well ask if the huge expendi-

1 Famine Enquiry Commission, 1945, p. 148. Even in Western countries F. A. O. experts feel the need today of more careful research: "Because the responses to fertilisers and manures are so variable, depending on soil, crop (and even different variaties of the same crop), season and other factors, a large number of experiments on a variety of soil types, with different crops and in different years, are requred to make sound fertiliser recommendations. Experiments should be conducted to indicate what fertilisers and animal manures should be used, and in what quantities. It should also be noted that under certain conditions of soil and climatic conditions, crops do not respond to fertilisers......Usually fertiliser recommendations need to be based upon the individual soil types, rather than upon a district as a whole. In most places, even the local soil types differ widely in their requirements for supporting optimum growth." Fertilisers, F.A.O. 1949, pp. 85-87.

2. First Five Year Plan, p. 259.

ture on the production of fertilisers could not have been profitably diverted to stimulating the making of compost to prevent further soil deterioration, and precluding the use of organic manure as fuel by the supply of fuel wood by the maximum utilisation of our forest resources.

The Indian cultivator was familiar with the value of manure in the past. Even today the ryots "have a keen eye to the result of a good system of farming as exhibited on model farms, but they cannot derive much good from the knowledge, though they may take it in and thoroughly understand that superior tillage and proper manuring mean a greater out-turn in crops."[1] What the Indian farmer lacks is purchasing power. A price economy based on *laissez-faire* cannot make amends for this lack of purchasing power by experimental work on demonstration farms and encouragement of research on agricultural problems. That these have their value no one can dispute. But unless a system of large-scale advances to the cultivator for the purchase of such available supplies of manure as exist, either through the Co-operative Credit Societies or by direct Government advances through the Department of Agriculture, is brought into operation, the problem of manuring cannot be solved.

APPENDIX

Irrigation Projects

Our country is engaged in one of the largest irrigation programmes in the world. The multi-purpose river valley projects provide irrigation facilities for growing additional food and commercial crops, control floods which cause enormous destruction to crop, property, cattle and human life and also provide for the generation of hydro-electric power. Among the other benefits which accrue are the development of internal navigation, soil conservation, afforestation and provision of drinking water. High priority is assigned to them in the First Five Year Plan, nearly a third of the budget being earmarked for river valley projects.

At present there are 153 projects under execution in different parts of the country. Of these only six are multi-purpose, 104 irrigation, and 43 power projects. The aggregate cost of all these projects is estimated at Rs. 680 crores. The following table gives details of the chief multi-purpose projects:—[2]

1 Elliot James, "Indian Industries," p. 6.
2 India, 1953, p. 218.

Multi Purpose Projects in Five Year Plan
Costs and Benefits

Project	Total Expenditure 1951-56 lakh Rs.	Irrigation Benefits 000 acres By 1955-56	On completion	Power Benefits 000 KW By 1955-56	On completion
Bhakra-Nangal	77,50	13,61	36,04	96	144
Harike	10.62	—	—	—	—
Damodar Valley Project	41,70	5,95	11,41	194	27
Hirakud	44,00	2,61	17,85	48	123
Additional funds for above projects	50,00	—	—	—	—
New Schemes (Kosi, Koyna, Chambal, Krishna and Rihand)	40,00	—	—	—	—
Total	**263,82**	**22,17**	**65,30**	**338**	**541**

CHAPTER X

OUR AGRICULTURAL PROBLEM (Continued)

Soil Erosion.

The problem of soil erosion is not a problem peculiar to India. It is estimated for example in the U.S.A. that something like 17½ million acres of land which were once cultivated have been destroyed by gullying.[1] Erosion implies the loss of humus of the surface soil, the crumb-like structure of the top layer, its water holding capacity, its bacterial content and all the other features which make it normally more fertile than the sub-soil. In normal course of things, if preventive measures are not adopted, the loss by erosion becomes all the greater, as the soil is depleted by tillage and resultant oxidation, and as removal of the surface soil exposes the more compact sub-soil. Even in the U.S.A. where erosion need not cause anxiety as to the supply of food, whereever erosion has occurred it has brought poverty. As for our country the problem is of special importance in U. P. and Western Bengal where extensive areas have lost their fertility by the formation of a net work of ravines. The monsoon rains on the hill sides in the Southern Districts of Bombay State and Chota Nagpur produce the same results. In ordinary conditions, the soil is usually protected by vegetation against the disintegrating effects of wind and rain. As soon, however, as the vege-

1 "Surveys of the United States indicate that 50,000,000 of once good crop land has been ruined for further cultivation, while another acreage of equal proportions has been badly damaged........In view of this widespread destruction already accomplished, it is significant to note that approximately 75 per cent of our total crop land is now subject to soil erosion, and therefore threatened with eventual extreme depletion." "Farmers in a changing world," Year Book of Agriculture, Washington, 1940.

tation is removed, the soil is exposed to wind and rain, making it useless for cultivation by the scooping out of ravines. Canals and ravines may be silted up, washing out the river banks. With the removal of the vegetation, moreover, the soil ceases to soak in rain water, and wells, streams and springs may all run dry. The removal of vegetation follows upon an increase of population or an increase in the number of animals. Deforestation and uncontrolled grazing particularly by goats, sometimes by cattle, contribute to the denudation of the soil; and this in turn is responsible for extremes of flood and drought which are the results of the gradual silting of rivers. Cultivation on the slopes of hills has also been known to cause erosion.[1]

The most common causes of erosion are deforestation and overgrazing. Grassland, if once destroyed, cannot be easily restored. It has been pointed out that over large tracts in India natural grasslands have disappeared and cattle are dependent upon bush and tree growth for their day to day feed. Whilst in other countries livestock are maintained on grass, and bush growths regarded as a reserve to be used only in times of acute scarcity, in our country the last vestiges of shrubs form the ordinary daily food of the cattle.

Under these conditions, putting the upper slopes of hills into grass may afford protection as also bunding or terracing. The main protection against soil erosion is to be found in a policy of afforestation, which has to be judged not in terms of its dividend yielding capacity, as the Agriculture Commission suggested, but by the bearing of such a policy on the welfare of the coming generations. More than four decades after Dr. Voelcker had drawn attention to the urgency of protecting land from erosion by the plantation of shrubs and wild trees by the Forest Department, Sir John Russell's report made the same recommendation in 1937. " The forestry department should be consulted as to the possibility of establishing small plantations as protection in places where the erosion is likely to occur, so that an undergrowth may have some chance of development." Sir John Russell's report was more explicit and went further in its views on the question of erosion when it said that the need

1. Thus the Planning Commission include among the causes of erosion destruction of forests, unregulated grazing by cattle, sheep and goats and the consequent depletion of the vegetation cover, intensive felling to obtain supplies of fuel and timber, and clearance of forests for extension of cultivation. It has been said that 2 per cent of surface soil is lost every year through erosion. In Bombay survey of 50,000 acres carried out at twenty eight centres selected at random showed that only 17 to 23 per cent of the area is not affected by erosion, while over 60 per cent is affected to such an extent that only 9 inches of the soil is left. (Thirumalai, "Post-War Agricultural Problems and Policies in India", 1954, p. 166).

was for more action rather than more research. Protection against erosion should be a State responsibility and each erosion area should be dealt with as a whole. An erosion conference should be held annually at which forestry, animal husbandry, and soil experts meet the agricultural officers and advise as to what measures should be taken. The appropriate minister should then have power to carry out these measures and to distribute the costs over the lands protected.[1]

The Planning Commission cannot shake themselves free from their prepossessions in favour of individual enterprise. "As a large part of the soil conservation work," they observe, "has to be done by the farmers, proper understanding on their part of the nature of the erosion problem, and their active participation in soil conservation programmes are essential for the success of these programmes. Improvements in farming practices depend entirely upon the farmers. Government's function is mainly that of convincing them of the need for such improvement."[2] The Commission, however, themselves resile from this creed when in the very next paragraph they refer to the steps for the control of erosion and conservation of soil taken by the States, and regret that there has been no countrywide effort in this direction. They even recommend legislation for the purpose. As a matter of fact prevention of soil exhaustion and erosion often call for efforts that are too great for private initiative. Extensive cultivation may lead to "soil butchering." Careless practices in one region may bring floods in another. Destruction of forests in one area may ruin land elsewhere. Even the stimulus of high prices for a short period of time may help to create a "dust bowl."[3] The dangers of State autonomy with agriculture as a State function, in the absence of a unified policy, illustrate the need for a strong Central Government enforcing an all-India plan in the wider interests of the country.

Control of Pests and Diseases

Insects, pests and plant diseases are a source of serious loss

1 Russell's Report, p. 57. The Agricultural Commission took the view, however, that schemes for preventing soil erosion were to be left to private enterprise—"co-operative efforts" or were to be financed by loans to individual cultivators. The Commission could not shake themselves free from the principles of English Liberalism in which most of them had been brought up. (Report, p. 80).

2 First Five Year Plan, p. 299.

3 It was just this that happened in 1934 in the U. S. A. when the high market price for farm products, specially for wheat, encouraged the turning over of vast areas of grass land to the raising of grain. The soil thus loosened was actually blown away, leaving for cultivation for the unfortunate farmer only the less fertile layers beneath. The reddish dust that dimmed the rays of the sun in 1934 on the Atlantic Seaboard area was soil from the "dust bowl" of the central part of the country.

to agricultural production which is estimated at about 180 crores of Rupees per year.[1] Conditions in sugarcane fields are favourable to insect life, and large numbers of pests are known to occur. Among the worst are the borers which reduce the yield and the percentage of saleable cane. Cotton and food crops have similar problems. Sir John Russell recommended the institution of proper surveys of such pests, and the appointment of a visiting expert to advise as to the most suitable types of measures to be taken.

Three methods of controlling such pests are said to be in general use: (1) Avoiding the trouble altogether by finding resistant variety of crops. (2) Obviating the attack of the pest by some change in soil conditions, or in methods of cultivation. (3) Destroying the insect or fungus by chemical or biological means.

The entire problem with regard to pest and disease, except in connection with cash crops like cotton and sugar, seems to be in an experimental stage of survey and investigation. With speed of transport in our days, it may be found impossible to keep out disease organisms from other countries, and it will be a long time yet before effective methods of dealing with plant diseases are, in the first place, scientifically determined, and, in the second place, effectively used by Government on an extensive scale. We may notice, however, that a beginning was made in this direction by the Bombay Government which enacted in 1941 the Bombay Agricultural Pests and Diseases Act, based on a Madras Act of 1919. A Centralised Plant Protection Service was started in 1946 by the establishment of a separate Directorate of Plant Protection by the Government of India called the Directorate of Plant Protection, Quarantine and Storage, which advises the States on the control of the various diseases and pests, and helps them in setting up Plant Protection Organisations. Such an organisation now exists in all A States and some B States. Reporting and control of desert locusts have been greatly improved and expanded through a fund contributed by all States in accordance with their crop area and liability to infestation.

Tillage and Technique

The methods of cultivation in India are today what they were centuries ago. They are fundamentally the same as those

1 "The normal recurring loss to crops in India from diseases, pests, vermins, etc., may, on a conservative basis, be placed at 10 per cent of the total produce. Woodhead Famine Enquiry Commission, p. 158.

followed for centuries in the past in other countries. Agriculture is based on the attempt to satisfy the demand for grain as human food, for fibre, for clothing, and oil for burning, with very little thought for animal food except such stalks and wild grass as may be found for grazing. In India from early times the source of power is the bullock which gets preference amongst cattle when fodder is scarce. The agricultural implements, the plough and the spade are the same as of old. Careful observers have pointed out that the methods of cultivation pursued in India are the result of centuries of experience, and are far from primitive and crude. Their methods of sowing seeds, of inter-mixing crops, of weeding and pruning, of changing and intermixing soils, of ploughing the fields upto a particular depth for a particular crop may be capable of being improved upon in the light of modern agricultural science and research—but they have been based upon experience handed down from generation to generation and cannot be dismissed as inefficient. "To take the ordinary acts of husbandry, nowhere would one find better instances of keeping land scrupulously clean from weeds, of ingenuity in device of water raising appliances, of knowledge of soils and their constituents, as well as of the exact time to sow and to reap, then one would in Indian agriculture, and this not at its best alone, but at its ordinary level. Certain it is that I at least have never seen a more perfect picture of careful cultivation combined with hard labour, perserverance and fertility of resource than I have seen at many of the halting places in my tour."[1] So also Sir John Russell: "The Indian ryot compares favourably with any of the peasant populations I have met in different parts of the world."[2]

But whilst the intelligence and empirical knowledge of the Indian ryot are thus recognised, it has been said that, in agriculture as in industry, we have to adjust ourselves to the use of scientific methods and mechanical appliances, if we desire to increase our production and enable our people to escape from the poverty, to which they are at present confined, into a more comfortable and prosperous existence.

It is a truism that with improved methods of farming, application of manure, timely sowing, and mechanical appliances we could get much more from the soil in India than we do with "present methods." Two tables obtained from Mr. Keatinge's works are representative of these possibilities of improved

1 Dr. Voelcker's Report, p. 10.
2 Op. cit. p. 3.

methods:—[1]

Determining Factor	Percentage of crop increase available Surat	Jalgaon	Poona	Dharwar
Manure	30	30	30	30
Cultivation	20	25	30	35
Seed	10	10	10	10
Drainage	10	—	—	—
Field Embankments ..	—	15	15	20
Total..	70	80	85	95

Crop	Value out-turn per acre Obtained by villagers Rs. as.	Obtained on Government Farm with advantages mentioned above Rs.
Jowar	24-13	55 (Kharif) 80 (Rabi)
Bajra	17- 4	38
Wheat	24- 2	53
Groundnut	45- 0	99

Improved Seeds

The evolution of improved strains of crops through selection, hybridisation and the introduction and acclimatisation of foreign types is recognised as an effective method of improving production and increasing it. It is estimated that an increase in production of from 5 to 10 per cent can be obtained from improved varieties. The Congress Agrarian Reforms Committee Report gives us the following table showing areas under principal food crops under improved varieties of seeds:—[2]

Crop	Area under improved seeds: Estimated area under improved seed (in millions of acres, 1938-39)	Estimated percentage of area under improved varieties in 1938-39
Rice	4.5	6.2
Wheat	7.9	22.4
Jowar	0.6	1.1
Groundnuts ..	0.6	6.7
Gram	0.2	1.6

The Woodhead Commission also give us a table showing comparative figures for 1926-27 and 1938-39:—[3]

	Estimated area under improved varieties in millions of acres		Estimated percentage of area under improved varieties 1938-39		Estimated annual increased production by improved varieties in millions of maunds
Crop	1926-27	1931-39	1926-27	1938-39	1938-39
Rice	0.9	4.5	1.1	6.2	9 (paddy)
Wheat	2.9	7.9	11.9	22.4	15.8
Jowar	0.1	0.6	0.5	1.1	0.6
Groundnuts	0.4	0.6	10.3	6.7	1.05
Gram	0.1	0.2	0.8	1.6	0.2
Cotton	3.6	6.5	22.7	27.5	3.2 (seed cotton)
Jute	0.5	1.6	13.1	50.2	3.5
Sugarcane	0.2	2.1	7.2	68.2	420 (cane)

1 "Agricultural Progress in Western India," p. 104.
2 Report, p. 160.
3 Report, p. 152.

It will be noticed that the largest increase in area as well as yield occurs in the case of cash crops. The Planning Commission observe that there is much room for improvement in the system of multiplication and distribution of seeds. They recommend the establishment of a large number of seed farms in every State under the supervision of the Agricultural Department which can also be used for other experimental work. The Commission also observe that pedigree seed issued for cultivation has to be renewed every four or five years to keep up its quality. There is need to obtain accurate information as to what happens under the cultivator's field conditions which leads to the deterioration of sound seed. Seed testing facilities are at present rare, and seed cleaning facilities exist only in three States. Improved seed distributed annually amounts to 166,000 tons or about 5 per cent of the estimated total seed used. The Five Year Plan provides targets in each State for the area to be sown to improved seed for paddy and other food crops.

Rotation and Mixed Cropping

The practices of fallowing and rotation of crops were known to the Indian cultivator; but the pressure of population on the land and the increasing demands made upon the soil have led naturally to a reduction in fallowing. Even today as regards mixed cropping and rotation, it is not unusual to find the cultivators, when drilling a cereal crop such as jowar to put in at intervals a few drills of some leguminous crop like arhar. This mixed cropping has the advantage of providing agriculture against the fluctuations of season, so that if for any reason one crop fails the other will stand. This is a matter of importance for one who has to feed a large family and cattle on a few acres of land.

Dr. Voelcker pointed out innumerable instances of rotation of crops found in almost every part of the country, where several sorts of crops are grown together wheat, barley and gram or these with rape as well. There are systems in use which are far more complicated than the above—not only rows of different crops side by side but the alternating rows made up of mixture of different crops, some of them quick growing and reaped early, others of slower growth, and reaped after the former have been cleared off. Some are deep rooted plants, others are surface feeders. The whole system is designed to cover the land, and thereby to prevent the loss to the soil which would

result from the sun beating down upon it, and from the loss of moisture which it would incur. It may be admitted that these rotations actually practised can be improved upon, and that inferior cultivation has sometimes resulted from injudicious rotations. But the attention of Government was centred on the rotations connected with cotton and sugar. The Agricultural Commission confessed that it was impossible for them to make exhaustive enquiries in regard to crops which did not come within the purview of the Indian Cotton and Sugar Committees. Sir John Russell reviewing the work done under the direction of the Imperial Council of Agricultural Research could only refer, in a report covering 230 pages, to the possibilities in Sind under the Llyod Barrage Scheme of an intensive rotation of cotton, barseem, wheat; and even here he had to admit that rotation would involve manuring; and that though there was considerable local demand for fodder, and scope for the development of a livestock industry, dairy produce would be hampered by distances from markets.

In brief, there is not much scope for improvement on the present methods of rotation and mixed crops. If there is scope, investigations on better methods have been centred on cash crops like cotton and sugar. As regards a staple of food like rice, it was pointed out by Dr. Voelcker that rotation is not practised with rice, and that this can be readily understood when one takes into account the conditions under which rice is grown. Silt renewed lands require no manure and are plentifully supplied with water, and are thus independent of the manurial benefits secured by rotation. Forty-five years later Sir John Russell observed: "Experience generally is in favour of rotations rather than single cropping. Rice is of course the great difficulty: alternative crops and sequences are easier to arrange on light than on heavy soils, specially those liable to be flooded."

Implements

Ploughs have been made the subject of attempted improvement. Iron ploughs have been used on Government farms; but they have not found their way among the ryots. The causes are not difficult to understand. The price of a wooden plough is very much lower than that of an iron plough. The latter is heavy to work and cannot be carried on the cultivator's shoulder from field to field. There is further the difficulty of repairs, as it cannot be easily repaired except in a small foundry. Deep

ploughing with an iron plough might bring up limestone to the surface, with the possible loss of moisture in the soil. It might oxidise the store of nitrogen in the soil, and destroy the balance of soil fertility. [1] Deep ploughing, moreover, might necessitate greater quantities of manure than the cultivator can afford and contribute to the spread of weeds by digging them in. For rice cultivation the wooden plough has definite advantages over the iron plough. The Agricultural Commission observed that agricultural implements in India were well-adapted to local conditions. "They are within the capacity of the draught oxen, comparatively inexpensive. light and portable, easily made and easily repaired and they are constructed of materials which can readily be obtained. In spite of these advantages, there is undoubtedly very great scope for improvement in the light of modern knowledge of soil conditions. The Agricultural Departments have, however, so far done disappointingly little in this direction."[2] 17,000 improved ploughs were sold in 1925-26. A total of 25,000,000 ploughs were in actual use in British India in the same year. Sir John Russell struck a more hopeful note when he observed, "The new implements are not always more effective than the old, but they are lighter, require less labour of men and bullocks, and they do their work more rapidly. Economy of bullock power means that the large cultivator need not possess so many bullocks and so can better feed his milch cattle; and speed of work means that operations can be done just when necessary, and when therefore they are most beneficial."[3] There are possibilities of improvement in the bullock cart in the shape of ball bearings and rubber tyres—though the problem may be simplified by the development of motor transport.

Under present conditions, with the small and scattered holdings that mark Indian agriculture, the use of agricultural machinery like steam tackle and motor tractors is obviously outside the purview of the cultivator. The Indian Sugar Committee observed with regard to motor tractors that their use would be more economical than steam tackle, and that a tractor would displace eight to ten pairs of bullocks. Progress in this direction on large-sized farms may now be expected under our Government.

During the past twenty years, despite greater attention

1 Howard, op. cit. p. 15.
2 Report, p. 107.
3 Op. cit. p. 59.

paid by Government to agricultural research, very little has been done to improve indigenous implements. An Agricultural Engineering Section was added to the Indian Agricultural Research Institute in 1945.

Land Reclamation

Land reclamation and clearance are second in importance only to irrigation projects in the Five Year Plan. As in the case of the irrigation projects they are a continuation and intensification of activities already under way prior to the Plan. These reclamation schemes are linked up with the "Grow More Food" campaign and with the settlement of displaced persons, whether refugees or ex-soldiers. The Plan envisages reclamation of 7½ million acres by 1955-56 through eradication of *kans* grass, jungle clearance and reclamation of land which for a variety of technical and social reasons has remained uncultivated for several years. The work is to be largely carried out by the Central Tractor Organisation, which was founded in 1947 with 200 tractors left behind by the U.S. Army. Concentrating mainly on the reclamation of land infested with *kans*, a deep rooted weed, it also undertakes tree-felling and jungle clearance operations. The Government of India in 1951 purchased 240 new tractors out of a loan obtained from the International Bank of Reconstruction and Development. In 1950-51 about 282,000 acres of land were thus reclaimed.

Live-Stock

In a country like India where the only motive power as well as means of transport is the bullock, the prosperity of agriculture depends among other things on the live-stock. Whilst in most parts of the world, cattle are valued primarily for food and milk, in India their value is mainly determined by their use for agricultural operations. In Western countries, horses played a predominant part in the past, and are now being replaced by mechanical appliances.

It is difficult to place a definite monetary value on cattle labour. According to the 1951 Census, India had 292,000,000 live-stock of which 155,000,000 were cattle.[1] India has the largest cattle population in the world. According to calculations based on the price of 1929, the annual value of live-stock and animal products was estimated at over Rs. 2,000 crores per annum.

1 India, 1954, p. 159.

Taking a 33 per cent fall in 1929 prices, the value of the various items was calculated as below:—[1]

	Crores of Rupees
Milk and milk products	540
Cattle labour in agriculture	408
Manures	180
Labour for purposes other than agriculture	107
Other products	30
Live animals exported	0.12
Total	1,265.12

This did not include the value of poultry. As Mr. Macdonald observes, "Poultry farming in most countries is regarded as the Cinderella of agriculture, and in no country is this term more apt than in India, for until recent years practically no attention has been devoted to any branch of production or marketing."[2] Specialised and organised poultry farming is conspicuous by its absence. Yet it would appear to be an important element in our economy. The Egg Marketing Report for India and Burma gives the following figures:—[3]

	Lakhs of Rupees
Desi Fowls	514.7
Improved Fowls	7.3
Ducks	54.8
Geese	1.6
Turkeys	0.1
Guinea Fowls	4.2

Poultry is a sadly neglected branch of agriculture. It is an important element in our rural economy, because more than 60 per cent of the hen eggs and 80 per cent of the duck eggs are actually sold in the market and not consumed by the producers themselves. The total value of the eggs sold is estimated at Rs. 5¼ crores per year and that of birds at Rs. 7 crores. Our eggs production is comparatively very low, 54 eggs per bird as against 100 to 120 eggs per bird in other countries. The size is also about two-thirds of that in other countries which employ modern methods of production. The low egg production has been attributed to factors such as poor stock, disease, malnutrition and general mismanagement. The *per capita* consumption of eggs is calculated at eight as against 150 to 300 in other countries. The few facts indicated above show that in animal industry we possess "an enormous potential wealth, probably greater than the value of a single industry in any other country in the world."

1 "Animal Industry" in "Economic Problems of Modern India," Vol. I. edited by R. Mukerjee, 1939, p. 140.

2 "The Poultry Industry in India," in *Indian Farming*, Vol. I. p. 60.

3 *Ibid.*

According to the Planning Commission one serious handicap of poultry farming has been the extreme susceptibility of poultry in India to Ranikhet disease; but an effective vaccine has been recently brought out, and the prospects of poultry raising appear to be now more favourable. A sum of Rs. 25.15 lakhs during the period of the Five Year Plan for encouraging poultry farming has been provided by the State Governments. Selective breeding and proper development of poultry have been included in the Key Village Scheme, and it is hoped that in areas of intensive cultivation and in community projects areas necessary facilities will be offered to the cultivators. [1]

The monetary value of cattle labour has been estimated at Rs. 400 crores roughly per annum. An enquiry into the value of cattle labour in holdings in the Punjab estimates the cost of cultivation under cattle labour at between 15 and 20 per cent. and this has been confirmed in a recent investigation.[2]

According to a recent F. A. O. publication, the world's live-stock is about 1738 million animals. Of these 291 million are located in India. With regard to the increase or decrease of cattle during the last few decades, the evidence afforded to us by the following table does not support the view that the number of live-stock is decreasing:—

Bovine Population for Undivided India

Numbers in Millions

1920	145.8	1945	144.5
1925	151	1947-48	175[3]
1930	154.6	1948-49	173
1935	153.7	1949-50	173
1940	147.7	1950-51	195

When we compare the number of cattle per hundred of the population in different countries, we have to remember that cattle in India are chiefly valuable for draught purposes, that meat is not a staple article of food, and that milk is chiefly produced as a by-product of agriculture. Elsewhere, cattle are valued for meat and for dairy products. It has also to be remembered that in India a large number of cattle are old

1 Op. cit., p. 278.

2 Investigation carried out under the direction of the Imperial Council of Agriculture.

3 The figures from 1947-48 are supplied by "India, 1953" p. 251. They are for India, excluding Pakistan. It is difficult to account for the marked divergence between the figures for 1945 for undivided India and that after the Partition for divided India. The following is the full table as reproduced from "India, 1953" in millions:—

	1947-48	1948-49	1949-50	1950-51
Bovine	175	173	173	195
Ovine	81	80	79	88
Others	6	6	6	7
Total	263	260	260	291

and decrepit, and instead of being an addition to the income are a burden on an already impoverished soil. Under these conditions, a reduction in the number of live-stock so as to bring the livestock population into line with the supplies of food would tend to relieve the burden on the soil. The Cattle Utilisation Committee estimated that about 10 per cent of cattle population or about 11.4 million adults are unserviceable or unproductive.[1] Economic pressure by the enclosure of grass lands, the practice of castrating scrub bulls, and improvements in farm implements, particularly in the bullock cart, reducing to the extent the need for bullocks may contribute towards a diminution in the cattle population which will in turn favourably react on agriculture.

Cattle and Grazing

A large proportion of the cattle of this country depend entirely on grazing for their nourishing, and such grazing is only of value for about five months in the year. In India, "the custom is that the animal, when not working should find its own food on the village common, or on uncropped land, or in the jungle when there is no fodder available on the holding. The by-products of cereals and pulses are stored and fed to cattle as long as they last; but very rarely indeed do cultivators resort to outside sources, for example, to the supplies of baled dry grass available in forests. Thus we were informed in the Central Provinces, where much grass is baled in the forests, that in one locality only did cultivators purchase it.[2] In other provinces, we were informed that in accordance with the general policy favoured by the Forest Department, Forest Officers would gladly encourage grass cutting by villagers, but that no demand for it existed. These forest supplies are looked upon as famine reserves, not to be used in normal times. This difference between the cattle owners of the East and West must be kept in mind in considering all suggestions for cattle improvement."[3] The Agricultural Commission observed that action which in many countries would render owners liable to prosecution is regarded in India in an entirely different light. If this is intended to be a reflection on the Indian cultivator, one might well ask if this is not one of those hasty generalisations based upon preformed prejudices about the ignorance of the Indian cultivators, and whether the tradition about forest supplies as

1 First Five Year Plan, p. 273.
2 Have the cultivators necessary purchasing power?
3 Agricultural Commission Report, p. 200.

famine reserves was not built upon the blunders of Forest Administration. After a careful examination of the situation, the Agricultural Commission observed: "Having regard to the poor quality of the grazing available, and to the fact that it fails to afford adequate maintenance for cattle at the season of the year when fodder grown on the cultivated land is scarcest, we are of opinion that this number of cattle is a heavy stock for land to carry. If the cattle are to yield a profit which would be accepted as satisfactory in countries, where stock keeping is strictly economic, the bullocks would require to be fully employed, the cows to be of a heavy milking strain and the manure to be carefully conserved and returned to the land."

The total number of cattle in India is determined by the number needed for work on the land. The Agricultural Commission pointed out that assuming the cattle to be efficient, there would appear an excess in the number of cattle. The worse the conditions for rearing efficient cattle, the greater tend to be the numbers necessary for agricultural purposes. Cows become less fertile, their calves are undersized, and this compels the farmers to breed more and more cattle. As numbers increase, the pressure on the available supply of food lends to still further deterioration in the quality of the cows. As cattle grow smaller in size and greater in number, the amount of food needed in proportion to their size increases. Thus, a large number of small-sized cattle involve a serious drain on a country in which the fodder supply is so scarce as it is in India in certain seasons. Attempts at improving the quality of the live-stock by distributing better bulls are partially frustrated by the number of animals relatively to the supply of food. The main problem of animal husbandry is that of increasing the production of food for animals. As Sir John Russell observed, the amount of food produced is insufficient for the large number of animals in India. Many of them are inadequately fed. Only two-thirds of the cattle can be maintained in a fair condition on the available fodder and feed.[1] The bullock may be treated a little better, but the cow is not so well-fed and with a low diet gives only a poor yield of milk.

Importance of Cattle for Soil Fertility—Mixed Farming

The cash value of cattle manure in India has been estimated at between 180 and 270 crores of rupees. This estimate has been criticised as being based upon very meagre information.

1 First Five Year Plan, p. 274.

At present, we are maintaining a dense human population by methods which are suited to an extensive system of farming. Large areas are farmed to offest low crop yields. Such methods may be suitable to newly developed countries like Canada and Australia, where the population is small and the land is ample. In India with a density of 281 per square mile, it is desirable that the output of produce per acre should be high. Under these conditions, the development of agriculture requires "the dove-tailing of the arable and animal husbandries into one mixed-farming system." "The cattle problem dominates the whole situation."[1] A mixed-farming system involves the utilisation of all available manure and the cultivation of leguminous fodder crops, which contributes to soil fertility. The fodder crops would in turn provide an ideal source of food for cattle, and particularly for milking stock. Under mixed-farming, the production of animal products such as milk will be carried on side by side with a system in which leguminous fodder crops will maintain the fertility of the soil, and the resulting increase in crop yields will offset any increase in the cost of production of milk. This is borne out by the experience of other backward tracts. Writing about the agriculture of Nigeria, the Gold Coast, and Sierra Leone, Stockdale observes: "Larger yields of crops are being secured, and the farmers, in addition to having more ample food supplies and larger quantities of economic crops for sale, are also being provided with supplies of animal products such as milk and butter, for their consumption and sale. There is no doubt that they have been enabled to live better than was possible under the old order, and in consequence it is expected that their own health and that of their families will benefit."[2] Moreover, mixed-farming will stimulate capital accumulation as dairy farming would give steady employment throughout the year to the farmer.

Work on cattle improvement has been carried on by the Government, by cattle breeders and by charitable agencies. Among the breeds in India there are three divisions, viz., milch, draft and dual purpose breeds. There is a possibility of the breeds of Indian cattle being developed eventually into dual purpose animals. Approximately 750 farm-bred bulls of known pedigree are distributed annually by Government in different States. There are, besides, approved bulls belonging to private

1 B. A. Keen, "The Real Problem in India" quoted in Dr. Wright's Report on Development of the Cattle and Dairy Industries of India, 1937.

2 Quoted in Wright's Report, p. 60.

owners. But the existing number of approved bulls meets less than 0.5 per cent of the total requirements of the country. The production and use of an adequate number of superior bulls of known parentage is proposed by the Planning Commission in their Key Village Scheme. Six hundred centres are to be established during the period of the Plan, each centre to consist of three or four villages, where breeding will be controlled and confined to three or four superior bulls maintained by the farmers. Unapproved bulls will be removed. It is also proposed to establish about 150 artificial insemination centres at the rate of one per four Key Villages. When in full swing the scheme is expected to produce 60,000 bulls per year.

The Problem of Milk and Dairy Industries

When considering the question of improving the breed and quality of cattle, as the Agricultural Commission pointed out, care should be taken not to attempt to produce a "dual purpose" animal, suitable both for draught and for milking and ghee production. The Commission suggested that milking qualities should be encouraged only in so far as these are consistent with the maintenance of the essential qualities which good draught cattle must possess.[1] India has a *per capita* production of milk which is very low as compared with other countries. The following figures indicate this:—

Average yield of milk per cow in lbs.

India	413
Netherlands	8000
Australia	7000
Sweden	6000
U.S.A.	5000

Systematic milk recording is practised only at Government and a few privately owned farms. Annual industrial yields vary from 65 lbs. in Madhya Pradesh to 1445 in East Punjab. The Indian Union maintains nearly 15 times the number of cattle in Canada, but produces only twice the quantity of milk. It has to be remembered that the greater part of the production of milk in India is utilised for making ghee, and Indian cattle as a class cannot be compared with the specialised dairy cattle of other countries. Shortage of feeding stuff is chiefly responsible for the low milk yields of Indian cattle. Cattle are, moreover, said to deteriorate in States which are areas of heavy rainfall, due to the poor food value of paddy

1 Report, p. 212.

straw. A large number of milch cattle get little fodder except for some normal grazing during the monsoon season. The nutritive values of dry fodder are comparatively poor.

The total annual gross production of milk has been estimated by the 1950 Report on Marketing of Milk in India at 583 million maunds. Though the volume of production is so large, owing to the density of her population, the *per capita* consumption of milk is extremely low. It does not exceed six ounces per head per day. If consumption is to be increased, it is not only necessary to increase the present output of milk but to effect such economies in the cost of production and distribution as will bring it within the purchasing power of the mass of the population. Marketing surveys show that out of the total output about a third is consumed as liquid milk. Of the remainder, 75 per cent is converted into ghee, and over 22 per cent into khoa, dahi, and other indigenous products. Western products such as 'creamery' butter and cheese are scarcely used except by Europeans and a few Indians. "An increase in the value of the ghee by one per cent would add more to the wealth of the dairy industry than the replacement of the whole of the imported milk products by home produced articles."[1]

It has also to be remembered that facilities for rapid assembling, transport under suitable conditions and cheap distribution of village milk are practically non-existent. The report on "The Marketing of Milk in the Indian Union" published in 1950. observes:

"In India although the defective, filthy and often dangerous methods employed in the production, handling and distribution of milk are generally well-known to all, little or no biological work has been done so far to bring to light their effects on public health...... The universal Indian practice of allowing the calf to suckle a little milk before each milking, the practice of milking the animals on the streets for door-to-door delivery, the dirty udder and unwashed flanks of the animals, particularly of the buffaloes which wallow in the mud, the

1 Wright's Report, op. cit. pp. 9-10.

Cf. Dr. Kothawala, Dairy Development Adviser to the Government of India, said: "the Indian Dominion possessed 38 million cattle heads constituting one third of the total cattle population of the world. But the average milk yield per catttle was so low that there was not enough milk to go round. From a nutritional point of view an individual required 16 ounces of milk per day, half the quantity to be consumed in liquid form and the other half in the shape of milk products. On this basis India's milk production would have to be increased three fold to ensure that every one got the minimum quota of milk." Appendix to the Summary of Animal Husbandry. National Planning Committee's Report on Animal Husbandry, Dairying, etc., p. 228.

unwashed and contaminated hands of the milker, his dirty clothing and insanitary habits, e.g. coughing, sneezing, and blowing the nose with fingers, etc., the diseases, if any, of the milker and others handling the product, the filthy condition of the cattle stable which exposes milk to manurial contamination, the unclean and defective transport arrangements, the practice of putting leaves, paper and straw in milk to prevent spilling from open cans, the warm climate of the country so favourable for rapid growth of bacteria, the ignorance and indifference of persons generally engaged in the milk trade even towards the elementary principles of cleanliness, the insanitary condition of the open milk shop in streets, the lack of suitable technical and educational facilities to create better understanding in the people concerned, the addition of dirty water to milk, the lack of adequate control by the health authorities, are only a few of the many sources and causes which unfortunately pollute the supply of market milk in India and help to keep its standard low compared to other countries."

There have been subsequently two new schemes, one a Delhi Milk Supply Scheme and the other a Bombay Milk Colony Scheme, known as the Aarey Milk Scheme. Till the summer of 1949, Bombay obtained its milk supply largely from small buffalo herds located, under very insanitary conditions in the city itself. About 55,000 cattle were kept in a most uneconomic way, as good milk buffaloes were often brought from distant places and slaughtered at the end of the lactation period, instead of being kept for further milk production. In 1948 the Government of Bombay started building modern stables for dairy herds about 20 miles north of Bombay. Some 30 to 40 new farms were erected, in former jungle lands where cattle owners could run their herds. The dairy attached to these farms was equipped with the most modern sanitary installations. In 1949 more than half a million milk consumers in Bombay received good quality milk from the new plants.[1] It may be added, however that though the Scheme has provided pure milk, one of the main objectives for which it was started, viz., to reduce the high price of milk, has not been achieved and is not likely to be achieved in the near future. Similar schemes, and generally speaking cooperative dairies need to be established all over the country to supply cheap and wholesome milk, which alone can improve the nutrition of the people.

1 Dairy-Products Commodity Series. Bulletin No. 24, Feb. 1953, F. A. O. pp. 13-14.

The development of the indigenous milk products like ghee and dahi is largely determined (a) by the fundamental difficulties involved in handling milk under tropical conditions and (b) by lack of adequate transport facilities. Moreover, as 90 per cent of the population live in villages attention should be concentrated . on the supply of milk and milk products for direct consumption by the rural population. The combination of producers on a village industry basis provides the most effective form of dairy organisation in India. Above all, any improvement in production must be supplemented by the provision of improved marketing facilities.

The methods of producing and handling milk in India require careful investigations to be carried out in practice under village conditions. Dr. Wright in his report suggests heat treatment as well as refrigeration, as methods of prolonging the keeping quality of milk. Refrigeration, however, is too costly, and could only be used for the despatch of milk from distant producing areas to large cities. As regards distribution, the possibility of a cheap method of loose milk delivery, eliminating gross forms of contamination, on the lines employed in Great Britain thirty years ago, needs investigation according to Dr. Wright. This would involve the use of a milk can with a wide mouth for cleaning and a hinged lid which would protect the milk during transit, costing five to ten rupees per can. The use of taps is not advisable, as they are difficult to clean and sterilise.

As regards ghee, it would appear from figures collected in different provinces that 65 per cent of the samples of ghee examined were adulterated. Cheap methods of detecting adulteration might be devised and increased marketing facilities provided. There is no single measure which would do more towards increasing and cheapening milk production in India than an improvement in the milk yields of Indian cattle. An increase in yield would lower the cost of milk production, by spreading maintenance costs and costs of labour over a larger output of milk. Breeding experiments at various centres show that by careful selection indigenous strains of Indian cattle can be built up capable of giving milk yields which can compare with those of average European stock. The majority of milch cattle in India are seriously underfed, as evidenced by the slow rate of growth and the long dry periods. A larger food supply is essential, and coarse fodders need to be replaced by leguminous crops like berseem and lucerne (alfalfa). These are important even

for Indian agriculture as they increase the fertility of the soil. Linseed, cotton seed and earthnut cakes contain rich protein concentrates, and fed to cattle might contribute to improve milk yields. The lack of purchasing power for such fodder on the part of the agricultural population can only be tided over by a properly planned rural finance policy.

CHAPTER XI

SUBDIVISION AND FRAGMENTATION OF HOLDINGS

Subdivision of holdings indicates the diminution of the total size of the individual farm as a result, among other causes, or partition of property between different heirs under the Laws of Succession and Inheritance. Fragmentation of holdings involves the breaking up of a single holding into scattered strips often separated by long distances. Subdivision of holdings in India is due chiefly to the Laws of Inheritance both amongst Hindus and Moslems, which enjoin succession to all the heirs in equal shares. As Radhakamal Mukerjee puts it: "Indeed, the tendency towards subdivision, which has been manifest in India during the last few decades only, has been the outcome of the interpretation of Hindoo and the Mohamedan law by English judges, with their strong predilection for individual succession to and private enjoyment of rights in land."[1] The acquisition of land by moneylenders accentuates the evil, by creating a number of small holdings and reducing the total left to be divided amongst the heirs. The social usage which sanctions the claim of each heir to a separate share in each quality of plots in the village results in fragmentation.

The low agricultural productivity of land in India has been frequently ascribed to this progressive subdivision and fragmentation of holdings in almost all parts of the country. As early as 1916 Mr. Keatinge, the Director of Agriculture, Bombay, observed: "It has long been a subject of comment in India that the land holdings of cultivators have become subdivided upto a point at which they are now in many localities very small, and that the holdings whether large or small, are frequently fragmented in a manner which is very prejudicial to effective cultivation. This progressive process of subdivision and fragmentation is due to the increase of population, and to the fact that the Laws of Inheritance which are enforced in this country operate in such a way as

1 "Land Problems of India," 1933, p. 55.

to give to each male member of a landholder's family a share in the family land... In the Bombay Presidency in general, and in particular in the Konkan, West Deccan, and the garden and rice tracts of Gujarat, subdivision and fragmentation have reached an intolerable point. . . . Fields measuring less than half an acre are found to be sub-divided into more than 20 separately owned plots, many of them of less than one *guntha* a piece."[1]

Bombay Province

Thus, in the Borsad Taluka (Kaira District, Gujarat) the following table shows the number and size of holdings in the Taluka with 72 villages in 1901 and 1921 :—

Size	1901 Number	1901 Percentage	1921 Number	1921 Percentage	Percentage increase or decrease of holdings Since 1901
5 acres and below	7,740	58	19,740	82	+125
Between 6 and 25 acres	5,107	38	3,916	16	— 23
Between 26 and 100 acres	570	4	432	2	— 3
Between 100 and 500 acres	30	—	29	—	—
Total	**13,447**	**100**	**24,117**	**100**	**+ 79**

	1901	1921
Total area in acres	**94,660**	**92,639**
Average holding in acres	**7**	**3.8**

Thus, it would appear that within twenty years the total number of holdings increased by 79 per cent ; but whilst the average holding was seven acres in 1901, it was reduced to 3.8 acres in 1921.If the process of subdivision had proceeded at the same rate during the next 20 years, the size of the average holding would have been less than two acres. According to Mr. Patel to whom we are indebted for the table, a pair of bullocks could on an average cultivate 25 acres of land in a year, and this constitutes an economic holding, according to the Broomfield Committee. In 1921-22, out of about 21,000 holdings in the Taluka only 349 holdings or less than two per cent were over 25 acres in size. An economic holding defined in this way would be too large for the Borsad Taluka. "We, therefore, choose, to define an economic holding from the point of view of the standard of the people in the Taluka... The size of the economic holding in our Taluka should be about 12½ acres per family... The size of the actual holding per family of cultivators is about two-thirds of the economic holding we have calculated."[2]

So also, a survey of certain selected villages in the Olpad Taluka (Surat District) in Gujarat in 1929-30 adopts 20 acres as the

1 Statement of objects—Draft Bill for Consolidation of Holdings, 1916.
2 A. D. Patel, "Indian Agricultural Economics," 1937, pp. 124 and 171.

size of the economic holding, "taking all the pertinent factors into consideration and assuming the average size of a family at five persons." The following table shows the extent of uneconomic holdings in the Taluka :—[1]

Summary Table of Holdings according to Groups of Villages

Group	Total number of holdings	Number of holdings of or above the size of economic holdings	Number of uneconomic holdings	Percentage of uneconomic holdings to the total
I ..	92	19	73	79.3
II ..	128	7	121	94.5
III ..	76	9	67	88.1
IV ..	92	3	89	96.7
V ..	203	8	195	96.0
Total ..	**591**	**46**	**545**	**92.2**

Dr. Harold Mann, Director of Agriculture in Bombay, published in 1917 the results of an enquiry in a typical Poona village. According to him the average holding was 40 acres in 1771, 14 acres between 1820-40 and 7 acres by 1914-15. 81 per cent of the holdings could not maintain their owners under the most favourable circumstances. He concludes: "It is evident from this that in the last 60 or 70 years the character of the land holdings has changed. In the pre-British days, and in the early days of British Rule, the holdings were usually of a fair size, most frequently, more than 9 or 10 acres, while individual holdings of less than two acres were hardly known. Now the number of holdings is more than double, and 81 per cent of these holdings are under 10 acres in size, while no less than 60 per cent are less than 5 acres[2]

We have equally striking evidence about the increasing subdivision of holdings in the Bhiwandi Taluka, Thana District, given to us by Dr. Bhagat. He gives us the following table showing average holdings based upon a study of 9,584 khatedars:—[3]

	1886		**1903**		**1921**		**1937**	
Holdings	No.	Percentage	No.	Centage	No.	Percentage	No.	Percentage
Under 5 acres	3,731	49.7	6,416	62.6	10,458	74.2	6,638	69.1
5 to 25 acres	3,041	40.5	3,205	31.6	3,404	24.1	2,426	25.5
25 to 100 acres	694	9.3	556	5.4	206	1.4	438	4.5
100 to 500 acres	39	.5	41	.4	30	.3	79	.9
Over 500 acres	—	—	—	—	—	—	3	negligible
Total	**7,505**	**100.0**	**10,218**	**100.0**	**14,098**	**100.0**	**9.584**	**100.0**

In 1927-28, Mr. Mukhtyar undertook a survey of the village of Atgam in Bulsar Taluka, Surat District. There were 461 families

1 J. B. Shukla, "Life and Labour in Gujarat Taluka," 1937, p. 92.
2 Dr. H. H. Mann, "Land and Labour in a Deccan Village," Vol. I, 1917, p. 46.
3 Dr. M, G. Bhagat, "The Farmer—His Welfare and Wealth," 1943, p. 93.

in the village of which 249 or 54 per cent were agriculturists. He gives us the following tables showing the extent of subdivision and fragmentation:—[1]

Subdivision

Number of Holders	1900-01	1917-18	1926-27
With more than 100 acres	1	1	3
„ 71-100 acres	5	3	—
„ 51-70 „	8	6	8
„ 31-50 „	21	9	7
„ 15-30 „	34	37	37
„ 6-15 „	39	107	95
„ 1-5 „	67	132	133
Below 1 acre	44	109	143
Total ..	219	404	426

Fragmentation

Number of Fragments	Number of Holdings with specified number of Fragments	Number of Fragments	Number of Holdings with specified number of fragments
1- 5	286	21-25	7
6-10	62	26-30	8
11-15	42	31-40	6
16-20	22	More than 40	3

Size of Plots	Number of Plots of each size	Size of Plots	Number of Plots of each size
Above 10 acres ..	30	5-6 acres ..	39
9-10 acres ..	12	4-5 „ ..	58
8-9 „ ..	11	3-4 „ ..	75
7-8 „	20	2-3 „ ..	135
6-7 „ ..	18	1-2 „ ..	320
		Below 1 acre	1,924

Size and Number of Plots below one acre

30-40 gunthas ..	201	10-15 gunthas ..	339
20-30 „ ..	311	5-10 „ ..	552
15-20 „ ..	216	Below 5 „ ..	305

(One Guntha = 1/40 acre)

The First Five Year Plan gives the following figures for Bombay:—[1]

Acres	% of holders
0-5	52.31
5-15	28.18
15-25	10.90
25-100	8.02
100-500	0.57
500 and over	0.02

More than 50% of holdings are below 5 acres. But this average size of the holdings does not tell us the true story, because of the uneven distribution of holdings. A detailed study of small

1 G. C. Mukhtyar, "Life and Labour in a South Gujarat Village," 1930. pp. 110-115.

2 p. 199.

holdings in Bombay State revealed the concentration of land in the possession of a few individuals. "Very few cultivators possess large holdings, but they possess among themselves a very generous slice of the total acreage. On the other hand, many cultivators possess small holdings which together account for only a very small portion of the total acreage.[1]

Madras Province

In South India, Dr. Gilbert Slater had undertaken a survey of a number of villages with a view to obtaining an accurate idea of the process of subdivision of holdings. This was undertaken in 1916. A resurvey of some of these very villages was undertaken in 1936 and the results are indicated in the following table :—

Village of Vadamalaipuram (Ramnad District)

Size of Holdings	1916 Number of holdings	1916 Extent in acres	1936 Number holdings	1936 Extent in acres
Between 1 and 10 acres ..	38	250	121	535
„ 10 „ 25 „ ..	38	649	37	594
„ 25 „ 50 „ ..	12	469	8	264
„ 50 „ 100 „ ..	3	211	1	160
„ 100 „ 250 „ ..	3	471	3	105
Total ..	94	2,050	170	1,658

With a reduction in total area there is a simultaneous increase in the number of holdings since 1916. The average holding is just half in size of what it was in 1916. It may also be noticed that sub-division has gone farthest in the smaller holdings of one to ten acres.[2]

Taking another village, Guruvayur, Malabar District, the following table indicates the extent of subdivision that has taken place in 1936:—

Size	Number	Extent in acres
Below ¼ acre	106	13.19
Between ¼ and ½ acre	125	44.68
„ ½ „ 1 „	152	100.49
„ 1 2 acres	69	95.73
„ 2 5 „	62	192.78
„ 5 10 „	24	169.73
„ 10 20 „	11	145.82
Above 20 acres	7	397.99
Total	556	1,160.41

The average size of the holding in this village is 2.1 acres. In a coconut tract intensively cultivated, this size would not necessarily be uneconomic. But as the figures indicate 68 per cent of the

1 Bulletin of the Bureau of Economics and Statistics, Government of Bombay, Vol. II No. 3.

2 "South Indian Villages—A Resurvey," edited by Thomas & Radhakrishnan, 1940, pp. 9-10.

total holdings are below one acre and 42 per cent are below half-an acre each.[1]

About the village of Gangaikondan, Tinnevelley District, we are told : " There has been a great increase in the number of tenants in the last fifteen or twenty years. . . . Many of these tenants are also agricultural labourers in their spare time." It may be noticed that, while there is a reduction in the number of land holders, there is less concentration of land in the hands of big landlords. This will appear from the following table:—[2]

Village of Gangaikondan (Tinnevelly District)

Size	Number of owners 1916	1934
Below 1 acre	105	100
1 to 5 acres	220	600
5 to 10 „	250	50
10 to 20 „	100	30
20 to 50 „	160	50
50 to 100 „	90	3
Total	**925**	**833**

On the question of fragmentation of holdings, specific data were not available, say the editors of this Resurvey of South Indian Villages, in 1916 with regard to most of the villages Dr. Slater, though specially interested in the question, did not get enough detailed answers. "More information has been secured on this question in 4 out of the 8 villages which have been resurveyed . . . There is room to think that the position has worsened in twenty pears."[3] In Madras the *Pattas* paying Rs. 10 or less formed 82.2 per cent, while it was 69.5 per cent twenty-five years earlier.

Other Provinces

The Land Revenue Commission which was appointed in Bengal, 1939, presided over by Sir Francis Floud, visited the province of Madras for the purpose of comparing conditions in other provinces with those of Bengal. They observe in their report : " Assuming 70 per cent to be the proportion of the agricultural population in 1931, the agricultural population of the province would number 32.7 million. The total net cultivated area is 31.7 million acres, and the average area per head of the population is, therefore, slightly less than one acre." "It seems that the average area in possession of a family in Madras is barely sufficient for its maintenance. The same problem exists, as in Bengal, of

1 *Ibid*, pp. 301 and 339.
2 *Ibid*, pp. 71-72.
3 *Ibid*, p. 340.

uneconomic holdings and the splitting up of holdings. The subdivision of tenancies is going on even more rapidly than in Bengal owing to the pressure of the population. 74 per cent of the *pattas* or raiyatwari holdings covering 36 per cent of the total area have an average area of 2.4 acres."[1]

So also writing in another connection the Floud Commission observe: "One of the most disquieting features of the enquiries made for the Commission by the Director of Land Records is that the percentage of families holding two acres or less is 41.9 and the percentage holding between 2 and 4 acres is 20.6. If these figures can be taken as representing the economic position throughout the Province, it means that two-fifths of the agricultural families hold an area of two acres or less, which is insufficient for their maintenance, and that they are compelled to take land as bargadars, without any legal rights, or to supplement their income by working as day labourers....However we look at the problem of uneconomic holdings, we are forced to return to the fundamental fact that there is not enough land to go round. There is now slightly less than one acre of cultivated land per head of the agricultural population."[2]

A sample survey of after effects of the Bengal famine revealed that, with a population of 75 per cent dependent on agriculture, paddy was cropped on 88 per cent of all the cultivated land. In April, 1943, before the outbreak of the famine, 36 per cent of all rural families did not possess any paddy land, 41 per cent had only upto two acres, 15 per cent had between 2 and 5 acres and only 8 per cent had above five acres of paddy land.[3] According to the Land Revenue Commission, Bengal, 1940, five acres of land would be the minimum area required to keep an average family in reasonable comfort; and if the land is capable of growing nothing but *aman* paddy, the area required would be about 8 acres. As we have seen only 8 per cent of the agriculturists had above 5 acres.

The same story is given to us by Dr. Calvert with regard to the Punjab. The following table shows the size and distribution of cultivators' holdings in the Punjab before Partition:—[4]

Size	Number of Holdings	Percentage of the total
1 acre and less	68,664	22.5
1 to 2½ acres	46,917	15.4
2½ to 5 „	54,461	17.9

1 Report of the Land Revenue Commission, Bengal, Vol. II, 1940, p. 30.

2 Report, Vol. I, p. 86. These conclusions were based upon investigation into the economic conditions of nearly 20,000 families in selected villages.

3 Sankhya, Vol. VII (1945-46), p. 374.

4 Board of Economic Enquiry, Punjab, Size of Holdings by Dr. Calvert.

Size	No. of Holdings	Percentage of total
5 to 7½ "	34,285	11.2
7½ to 10 "	28,370	9.3
10 to 15 "	31,000	10.2
15 to 30 "	31,753	10.4
30 to 50 "	6,729	2.2
50 and over	2,741	0.9
Total ..	**304,919**	**100.0**

The total cultivated area in the Punjab was 2,193,860 acres. This gives us an average of 7.2 acres per family. It will also be noticed that 55.8 per cent of the total holdings were below 5 acres.

The Punjab Board of Economic Enquiry showed that the number of holdings below 3 acres increased from 43.4 per cent of the total holdings in 1928 to 48.8 per cent in 1939.[1] In a village in the Punjab 12,800 acres were found to be scattered in 63,000 fields. Almost all enquiries made into land holdings indicate that the process of diminution of the size of average holdings is growing at a rapid pace practically throughout the country According to the Famine Enquiry Commission Report this trend is present in almost all the States in varying degrees. It is a reflection of the growing pressure of population on land. The following table gives the distribution of holdings according to size in different States:[2]

Distribution of holdings according to size

Average size of holding (in acres)	Madras	Punjab	U.P.	Bengal	Bombay	Mysore	Assam	Orissa
% of holdings:	4.5	10	N.A.	4.4	13.3	6.2	4.8	4.9
below 5 acres to the total	82	63.7	81.2	71.3	41.9	65.9	66.4	79.2
under 10 acres	85	80	93.9	88.3	60.9	86.7	87.4	89.5
under 15 acres	N.A.	87.9	N.A.	N.A.	72.5	N.A.	N.A.	94.3
under 25 acres	N.A.	93.7	99.1	N.A.	85.2	N.A.	N.A.	97.8

In Uttar Pradesh, observes Radhakamal Mukerjee, "in the district of Jaunpur, the average size of a tenant's holding is 3.5 acres. In the Gorakhpur District, in Pargana Sidhna Jobua, the average holding was found at the time of the last settlement to be only 1.3 acres; in Hata it was 0.9 acres, and in Salimpur it was 0.65 acres. It is probable that in such districts as Jaunpur and Gorakh-

1 Report of the Famine Enquiry Committee (1945) p. 256.

2 Agricultural Legislation in India. Vol. II. Consolidation of Holdings (issued by the Economic and Statistical adviser, Ministry of Agriculture, Government of India, 1950 p. 1.

The Planning Commission in an appendix (pp. 199-202) give us a table of holdings below 5 acres from which we reproduce abstract as below:

State	% of Holdings	% of area	State	% of Holdings	% of area
U. P.	81.2	38.8	Assam	66.1	26
Bombay	52.31	14	Mysore	66.2	25.3
Madhya Pradesh	51.5	10	Travancore-Cochin	94.1	44
Orissa	74.2	30.1	Himachal Pradesh	95.0	71
Bihar	83.3	N.A	Pepsu	45.4	8.2

pur several thanas of which exhibit some of the highest records of rural density, more than half the cultivators possess uneconomic holdings on which they are working at a loss. Such holdings, tiny as they are, are made up of small plots scattered all over the village."[1]

The figures calculated by Major Erskine in 1880, the U. P. Banking Enquiry Committee in 1929 and those arrived at by the Zamindari Abolition Committee in 1948 show that the process of diminution of the size of the average holding in the U.P. has been steadily growing.

According to recent study of agricultural holdings in the Kanpur District by Vidya Sagar the average size of holdings has come down from 3.1 to 2.7 acres in the four villages studied in two decades (1925 to 1945) and more than 75% of holdings are less than 3 acres.[2]

Discussing the distribution of agricultural income, Dr. V.K.R.V. Rao, says, "Out of 22 lakhs of registered holders of land in the Province of Bombay, no less than 10 lakhs had holdings of below 5 acres in size. In the other provinces more than 60 per cent of the cultivators appear to own holdings of less than 5 acres each. For 73 villages surveyed by the C.P. Provincial Banking Enquiry Committee, the figure was 68 per cent; for the 6 villages surveyed by the Punjab Board of Economic Enquiry, 70 per cent; for 2 villages in the United Provinces, 70 per cent and for 3 villages in the Madras Presidency more than 70 per cent."[3] One of the State Governments in their report to the Famine Commission, 1945, observe that "there is a tendency in all Provinces to progressive fragmentation of holdings.[4]

Causes of Subdivision and Fragmentation

The evidence afforded by the figures that we have quoted gives us a picture of an agricultural system which resembles that of China. It is based on a multitude of tiny holdings under conditions where climate, soil, irrigation and double cropping make it possible for a morsel of land to yield a living. It has also to be remembered that the normal unit of rural society, as in China, is the patriarchal family, composed of three or more generations living together, and augmented by other relatives, who though not forming part of the household share the family budget.

1 "India Analysed," Vol. III, 1934, pp. 175-76.
2 Bulletin No. 16 Department of Economics & Statistics, Uttar Pradesh, 1950.
3 "The National Income of British India," 1941, p. 190.
4 Quoted by Thirumalai, op. cit. 153.

We have been told that it is the increase of population in the country which has been responsible for the subdivision and fragmentation of agricultural holdings. Thus, the Floud Commission tell us, "As population increases the available land per head of the population decreases." We have also been told that it is the subdivision and fragmentation of land that have indirectly contributed to a rapidly increasing population. People who live on the margin of subsistence, cultivating minute strips of land, can have no stake in life. They have nothing much to lose by multiplying. Poverty and multiplication have frequenty gone together. This process of subdivision and fragmentation is helped by the operation of the Laws of Succession and Inheritance. At the time of succession every son insists on getting a piece of every kind of land. This results in a division which assumes the shape of a long ribbon or strip for every cultivator in the village. The attachment to ancestral property which makes the farmer stick on to a piece of the few ancestral acres is not a phenomenon peculiar to the Indian rural population. But when we combine this attachment to the ancestral land with the excessive poverty of the population, we begin to realise the seriousness of the problem.

The Laws of Inheritance and Succession have been in existence for centuries in India. In the early days land was fairly abundant and was not scientifically surveyed and mapped out as it is today. There was a good deal of unoccupied land, so that an increase in the number of householders did not necessarily imply, as it does today, a subdivision of holdings already in existence. The death of the head of the family, moreover, did not affect the solidarity of the family property. The family continued its joint existence for years together. Coparcenery was the rule, and division of property was the exception, as can be seen even today by the legal presumption that a Hindu family is to be regarded as joint until the contrary is proved. There were also alternative occupations in the village for the sons of a family who might prefer giving up agriculture when property was divided.

The conditions have rapidly changed during the last hundred years. The imports of cheap machine-made goods from England and the Continent have gradually led to the decline, if not disappearance, of the handicrafts and industries which once marked the economic life of the village. A considerable proportion of the village population that was hitherto absorbed in village industries was thrown out of occupation, and was converted into labourers on land, eager to snatch at whatever opportunities the limited cul-

tivated lands of the village offered to them. With the increasing process of ruralisation the demand for land increased, and this could only be met by an accentuation of the process of subdivision. Thus, subdivision and fragmentation of land were not only due to the Laws of Succession and Inheritance, but to the land hunger created by a growing population incapable of being absorbed in non-agricultural occupations. The surplus population dependent on land, which had already been noticed as a matter of grave concern by the Famine Commission of 1880, has enormously increased since then, eating up resources which might otherwise have been available for further production.

There is one more factor that enters into the situation, and contributes to the gravity of the problem created by excessive subdivision and fragmentation. So long as the farming family was providing for its own requirements by cultivating whatever holding was available to it, fertility could differ from holding to holding without affecting the general economic system. But when the costs of production on the holdings have to be adjusted to a competitive price structure determined by international supply and demand, the waste of land resources which accompanies the application of inefficient methods to small and fragmented holdings might well be a matter of the gravest concern. The small holders as a rule need most help due to this lack of resources, and yet this very fact of the fragmented holdings renders them "non-credit worthy," and therefore unfit for financial help from institutions like co-operatives.

Finally, the village money-lender also plays a part in aggravating the evil. "In addition to the Hindu Law of Inheritance, unequal fertility and assessment, another cause which contributes to this state of affairs is the gradual absorption of large amounts of land into the hands of the village sowkar by means of foreclosure of mortgages or sales etc. The agricultural population in consequence has only a limited area to divide among themselves, so far as the occupation of land is concerned."[1]

The Question of an Economic Holding

The question that inevitably arises when we consider the trend towards increasing subdivision and fragmentation of land is what would be the minimum size of an agricultural holding which can support a family of say five members. No answer can be given to such a question in abstract terms. The size of an agricultural holding in any country depends upon a variety of factors. It

1 Report of the Pardi Taluka Economic Enquiry Committee, 1926, p. 16.

will partly depend upon geographical and climatic conditions, partly upon laws and social institutions, partly upon the methods and technique of cultivation. The ideal size of the holding will vary likewise with the nature of the crop, and the objective behind the agricultural production—whether agriculture is carried on primarily for satisfying the food and other demands of the population within the country, or whether cash crops are being raised for an export market.

Thus where grain and wool are in demand, the large holding alone can be regarded as economic. Small farms, on the other hand, are best suited for dairy produce, vegetable and fruit growing or for vine orchards. For a century and half in England before 1875, there was an increase in demand for grain with a rapidly increasing populaion. The rise in the price of cereals led to farming on a large scale with capital and scientific appliances. But when after 1875 there was a trend towards falling prices in cereals, due to the cultivation of virgin soils and the development of rapid communications as well as scientific methods, large-sized farms ceased to be profitable, and small holdings were found specially adapted to meet the demand for butter, fruits and vegetables.

Thus the question whether a holding is economic or uneconomic cannot be settled in a rigid manner.[1] That unit of holding is ideal from an economic point of view which under given agricultural conditions makes for the maximum production. Now maximum production is determined by a Law of Proportions. Given a large holding, in order that it may yield the maximum return, it will require a definite amount of capital in the form of seed and mechanised implements and fertilisers, and also a definite amount of labour. If these are not available, large-scale farming may prove unprofitable. If the holding is larger than what the "equipment"—capital and methods—can properly cultivate, economic considerations demand that it should be decreased in size. If the holding is smaller than what the equipment can allow, it must be enlarged. An average holding of 50 to 60 acres in England or a holding of 150 acres in the U.S.A., may not be regarded as a large holding in those countries. But a holding of 50

1 The differences in views with regard to the size of an "economic" holding, which we have noted in the text, are partly due to two different interpretations of the word "economic." If by an economic holding we mean one that yields a maximum return by the use of mechanised methods and agricultural technique, we would have to face the problem of creating greater unemployment, due to the formation of huge farms. This would imply a social revolution. If, on the other hand, by an "economic" holding we mean one that would support an average family of five persons, we need not contemplate mechanised methods or fundamental change in the technique of production. This latter is better described as a subsistence holding.

acres in a country like India, with an agricultural class living from hand to mouth and sunk in debt, with an equipment that may be called the minimum consistent with the possibility of cultivating it, may be definitely characterised as an uneconomic holding because it is too large.

If we turn from these abstract questions to a few representative opinions expressed by experts, we find a wide variety of ranges. Keatinge in Bombay defines an economic holding as one "which allows a man a chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses. In the Deccan, an ideal economic holding would consist of (say) 40 or 50 acres of fair land in one block with at least one good irrigation well."[1] Dr. Harold Mann observes: "An economic holding is one which will provide an average family at the minimum standard of life considered satisfactory...the size of such a holding would be 20 acres."[2] Prof. Stanley Jevons fixed the size of a model holding which would enable the farmer to maintain a fairly good standard of life at about 30 acres. On the other hand, Sir T. Vijayaraghavacharya regards 4 to 6 acres as "the minimum subsistence family holding," although differences in soil, productivity, water supply, crop rotation and agricultural practice may alter the size of the holding.[3]

Whatever criterion we adopt of the minimum size of the economic holding, taking even one acre of land *per capita* as indispensable for human nourishment as Sir T. Vijayaraghavacharya suggests, it is obvious that we in India to-day fall far below even this minimum. The crop area for the whole of India *per capita* works out at 0.78 acres, though in States like Bombay and the East Punjab the *per capita* crop area may be a little more than an acre.

Measures for Consolidation

We have been told that consolidation of holdings is one of the effective methods of meeting the evils of fragmentation. Very often there is a confusion in the minds of those who discuss the problem, between the evils arising from the uneconomic character of the holding, due to its size as a whole, and the evils due to the fragmented character of the holding. Consolidation is suggested as a remedy for fragmentation; but even after consolidation has been effected, the size of the holding may still remain too small for adequately supporting an average family.

1 Keating, "Rural Economy in the Bombay Deccan," pp. 52-53.

2 "Land and Labour in a Deccan Village," Vol. II, p. 43.

3 Presidential Address at the Second Conference of the Indian Society of Agricultural Economics, April 1941, p. 15.

Various attempts were made by Government and private agencies for consolidation of scattered holdings. Some work is reported to have been done in Madhya Pradesh by the landlords, but met with opposition from the tenants. In Bombay under the Land Revenue Code, Government refused to recognise survey numbers of less than a certain minimum size. But as the law courts recognised such subdivisions, the particular section of the Land Revenue Code had to be repealed. Similar attempts were made in Baroda, Bhopal and Madhya Bharat. In Madhya Bharat fields below 15 acres are not partible under the tenancy legislation. On account of the limited scope of such efforts no substantial results could be achieved.

In voluntary consolidation Punjab led the way. Consolidation of Holdings Co-operative Societies, with a membership of 200,000 brought about a reduction of blocks of 18.24 lakhs to 2.36 lakhs. Till 1947-48 consolidation operations had been completed in 1552 villages out of a total of 21,881. The pace of consolidation on a voluntary basis has been slow, and necessitated, with the advent of popular Government, legislation of a compulsory character.

Legislation on Consolidation

The need for legislation for speeding up consolidation was felt early; the report of the Agricultural Commission drew attention at the need of undertaking surveys and checking further subdivision. Three stages may be marked in the history of legislation for consolidation. In the first stage legislation was permissive, as in the Baroda Act of 1920. In the second stage an element of compulsion was introduced. Thus the C.P. Consolidation of Holdings Act, 1928, authorised officers to confirm a scheme of redistribution, when not less than one-half of the permanent holders, holding not less than two-thirds of the occupied area, agreed to it. In Uttar Pradesh an order of consolidation can be passed if holders of one-third of occupied area apply for it. In the third stage a scheme of consolidation can be enforced in any given area without willingness of the landholders of the locality. The first attempt on these lines was made in 1927 in Bombay, in a Small Holdings Bill, defining a standard holding and stopping further subdivision. The Bill had to be dropped at the time, but in 1947 the Fragmentation and Consolidation of Holdings Act authorised Government to fix and determine, in relation to any local area the size of the standard area. On notification of the standard area, all fragments have to be entered in the Record of Rights,

and transfer of such fragments is prohibited except when they become merged with a contiguous survey number. Any transfer or partition which will create a fragment is prohibited.

Recent Legislation

The legislation undertaken so far is either permissive in character or compulsory. The Bombay Act and the East Punjab Holdings Act, 1948, are comprehensive in scope and obligatory in application. They do not, however, provide directly for the creation of economic holdings. They provide for laying down standard areas in notified localities which could be cultivated as separate plots, declare holdings below the "standard area" as fragments, and by prohibiting the partition of lands so as to create "fragments" give the right of pre-emption to owners of contiguous plots in case of sale of such fragments.

The class of persons whose holdings come under the scope of the Acts are variously described under the various acts. Under the Madhya Pradesh Act (1928) permanent holders include the *kedars.* The U.P. Act covers persons who are termed "cultivators", who are defined as persons other than a sub-tenant who cultivate a holding and include persons who have leased a whole or part of their holdings to a subtenant. The Bombay and Punjab Acts use the term "owner" who is defined as the occupant in the case of unalienated land, and in the case of alienated land the superior holder.

The element of compulsion is contained in the Madhya Pradesh Act in the section that provides that if not less than one half of the permanent holders in a village, holding not less than two-thirds of the occupied area in the village, apply for a scheme of consolidation, and if the scheme is confirmed, it shall be made binding on all the permanent holders of the area. The Bombay and Punjab Acts give power to the Government to notify any area in which it desires to prepare and enforce a scheme for consolidation of holdings.

Procedure

The applications for consolidation may or may not in the first instance be accompanied by agreed schemes of redistribution. A day is fixed for examination of the application, and intimation is sent to all the permanent holders of the village through proclamation. If the signatories make up the required number, the application is admitted, and the consolidation officer proceeds to draw up a scheme for redistribution. After this a Panchayat representing different interests is formed, whose duties are mainly advisory.

The village land is divided into different blocks according to the productivity of the soil, and holdings of similar productivity are exchanged where possible. Equal areas are brought together in three grades, superior, medium and inferior. Valuation of fields with the consent of landowners is recorded on a map. In the second place attempt is made to give each cultivator land suitable for the principal crops, the value being equal to the valuation of his original holdings. The possession is, then, redistributed, and holders are allowed to take over new plots on an agreed date. The holder of a mortgage or encumbrance can seek compensation.

Measures to prevent recurrence of the problem

Consolidation in itself offers no permanent solution, and the problem is likely to recur with every new generation. Restrictions are necessary on future partitions, exchanges or transfers. Legislation has, therefore, been undertaken in Bombay, Punjab, Uttar Pradesh and Berar. The Bombay Prevention of Fragmentation and Consolidation of Holdings Act (1947) makes it illegal to create a fragment of less than the standard size notified for a particular area. All fragments have to be entered into the village record, and transfer or lease of such fragments is prohibited. Courts are also prohibited from permitting partitions which result in the creation of a fragment. If no suitable buyer of a contiguous survey number is available, the fragment can be transferred to the State on payment of compensation to the owner. The East Punjab Holdings Act, 1948, has enactments similar to those of the Bombay Act. In U. P. consolidation was tried under the Consolidation of Holdings Act, 1939, in six districts, but the attempt did not prove successful, partly due to the lack of trained staff, and partly also to the great variety of land tenures. In Bombay a special Superintendent of Land Records and Consolidation of Holdings has been appointed from April 1948 and 186 villages have been selected for the implementation of the Act in the first instance. In the Punjab, under the East Punjab Holdings Act, 1948, the work has just been started.

With the abolition of Zamindaris and the introduction of land reforms the problem of consolidation is likely to become easier, and in most of the States, there is a growing opinion in favour of the principle of controlling the unrestricted rights of the transfer of land.[1]

[1] We are largely indebted for this section to the brochure issued by the Economic and Statistical Adviser, Ministry of Agriculture, on Consolidation of Holdings (New Delhi, 1950).

Suggested Reforms

(a) **Famine Enquiry Commission**—The last few years have witnessed a variety of proposals for solving our agricultural problem, so far as it arises from the small size of the plots cultivated. The Report of the Woodhead Famine Enquiry Commission (1945) draws attention to the defects in statistical information about holdings and farms. Such information is incomplete, and no information at all is available about "farms", the land actually cultivated by one person. The members of the Commission were divided about the relative economic advantages of small holdings consisting of 5 to 10 acres. The Commission was not in favour of recommending a change in the laws of succession which would be strongly opposed by public opinion. The Commission almost in a spirit of defeatism, point out: "No practical suggestion has been put forward for the prevention of sub-division without interfering with the laws of inheritance."[1] The Commission, however, recommended consolidation of holdings, and some limitation on the existing rights of unrestricted transfer.

(b) **Agrarian Reforms Committee:**—The Congress Agrarian Reforms Committee advocates the elimination of all intermediaries between the State and the tiller. They regard the Zamindari Abolition Bills which are in different stages of implementation in different States as a first step towards that objective, and recommend that in future sub-letting of land will be prohibited, except in the case of widows, minors and other disabled persons. Those who have been cultivating land continuously for a period of six years should get full occupancy rights. In other cases the owners may have the option, upto a certain period, to resume the holdings for personal cultivation. He can resume more land, upto the maximum prescribed, if thereby he does not reduce the tenant's holding below the economic. The Committee laid down three norms of the sizes of holdings:

(1) An economic holding, determined according to the conditions of different regions, which must afford a reasonable standard of living to the cultivator and provide full employment to a family of normal size.

(2) A basic holding, below the economic size, whose number and percentage in India is so large that the task of rehabilitation would be beyond the organisational competence of the State. The Committee evolved a new concept of a basic holding, smaller than the economic holding to which the rehabilitation treatment

[1] Report, p. 264.

may be applied, uneconomic in the sense of being unable to provide a reasonable standard of living to the cultivator, but not inefficient for the purposes of agricultural operations.

(3) An optimum holding, with a ceiling to the size looking to the managerial capacity and financial resources of an average cultivator in India. The optimum size of a holding should be, as a rule, not more than three times the size of the economic holdings. Exceptions are allowed in cases of joint families and charitable institutions.

The restricted form of family farming for holdings between the basic and the optimum, which are below the economic size, will be helped by multi-purpose co-operative facilities in reducing the inefficiency involved in farming on such units. The Committee recommend co-operative joint farms whenever a requisite number of below-basic holders come together and contribute a holding of the optimum size. The State should be empowered to enforce the application of varying degrees of co-operation for different types of farming. A beginning in this direction may be made in selected areas, and its extension entrusted to specially trained persons. Collective farming may be undertaken on a portion of reclaimed lands where landless agricultural labourers would be settled. This will give an opportunity to the State to test the economics of mechanised farming.

Finally the Committee observe that agrarian reform is to be looked at as an integrated whole, not to be tackled piecemeal, and to be implemented in the light of a uniform policy by a single and integrated machinery.

The Five Year Plan

The Planning Commission endorse a policy of abolition of intermediary rights, with compensation in the form of bonds, and recommend as a first step in land reform the institution of a census concerning the distribution and size of holdings in each State.[1] They accept the principle that an upper limit to the amount of land that an individual may hold is desirable. Uttar Pradesh prescribe 30 acres and Bombay 50 acres. The Commission prefer the Agrarian Reforms Committee recommendation that the upper limit should be about three times the size of a "family holding."

The Planning Commission define "small owners" as those who own land not exceeding a "family holding" and "middle"

1 The Planning Commission has set up a Central Land Reforms Committee to assist various States in the collection of the requisite land data for the fixation of ceilings on land holdings.

owners as those owning land in excess of one family holding but less than the upper limit of personal cultivation. The general policy, according to the Commission, should be to assist these owners to develop their production on cooperative lines. As regards uneconomic holdings which are also seriously fragmented, programmes of consolidation of holdings should be expanded and pursued with vigour. The Commission hesitate to pronounce definitely in favour of legislative fixation of a minimum holding below which sub-division is not permitted, but regard it as sound in conception. They believe that the solution of the problem of uneconomic holdings lies more in the direction of evolving a system of cooperative management of the land of a village, "rather than in attempting too many little adjustments in the holdings of individual owners or cultivators."

Small and middle farmers should be encouraged to group themselves voluntarily into cooperative societies. The area under a cooperative farming society should not be less than a prescribed minimum; it is not necessary to prescribe a maximum. Such societies should be given preference in the matter of finance, technical assistance and marketing. Preference should also be given to such societies in consolidation proceedings and in granting leases of waste lands belonging to Government for bringing them under cultivation.

The Bhoodan Movement

Vinoba Bhave's movement for the redistribution of land on a voluntary basis by the big landlords seeks to appeal to the conscience of a class of people who have hitherto shown no genuine concern in the welfare of the cultivating millions. No gesture of sympathy on the part of a few can solve the huge problem of a continent; and even this sympathy is, as so often happens in human dealings, mixed with adulterated motives like parting with unwanted waste lands which may be a drag on otherwise remunerative land.

Concluding Observations

If we can summarise the measures proposed to enable the country to escape from the consequences of fragmentation and sub-division they can be grouped under three heads: (1) consolidation of holdings, (2) defining an economic holding that could be made immune by legislation from further sub-division and (3) changes in the laws of succession and inheritance.

(a) In considering these proposals, it must, in the first place, be remembered that they are interconnected and interde-

pendent, and that any one of them taken by itself will be ineffective unless it is supported by the adoption of the others. The idea of equal inheritance by birth is deeply engrained in the minds of the people; and it might take a long time before a radical change of this kind can meet with co-operation on the part of the masses. Moreover as the Famine Enquiry Commission observe, from the point of view of productive efficiency there is very little gain in a measure which limits the right of partition by prescribing the minimum size of a holding and yet maintains the rights of the heirs to fractional shares. "The maintenance of a holding as one legal entity would not prevent the heirs from dividing the land for the purpose of cultivation."[1] Moreover it may be impracticable to attempt by legislation to compel the owners of fractional shares to cultivate the land of the holdings jointly.

(b) If an economic holding is to serve the purposes of an improved agriculture, the holder must not only be freed from the burden of his old debts but be provided with adequate finance for his seeds and cattle and implements.

(c) It must also be remembered that where cultivation depends upon the uncertainties of rainfall, the distribution of holdings in different soils may be an advantage. In many parts of India two or more crops are grown in dispersed fields, so that while a deficiency in rainfall may destroy one crop, there may be better return from other fields.

(d) A systematic utilisation of our culturable waste, much of which may be soil too poor to yield to our present methods of cultivation has been suggested with a view to accommodate the large numbers who may be displaced from their occupation by consolidation of holdings. The utilisation of these waste lands may however add to the agricultural imbalance which stresses plant production and leads to depletion in the fertility of land, owing to the growing disappearance of grassland and the development of animal husbandry.

(e) But not even all these measures would ensure the success of consolidation and of changes in the Laws of Inheritance, unless subsidiary occupations in the villages, the introduction or revival of cottage industries, and the organisation of large-scale production absorb a substantial part of the semi-idle inefficient labour which today contributes to the inefficiency of our agriculture. With increased size of the holdings, there must

1 Report, p. 261.

also be provided greater facilities in the shape of credit for the movement and marketing of crops.

(f) The success of any measures with regard to consolidation will depend upon their place in a comprehensive economic and social programme. Any isolated measure, any tinkering with the problem, any patchwork such as is characteristic of a *laissez-faire* tradition can only aggravate instead of solving the difficulties that confront our agriculture.

(g) Finally, we must not lose sight of the complexity of the problem. The fragmented and uneconomic holdings have brought about progressive agricultural deterioration and aggravated the poverty of the masses. Increasing indebtedness has accelerated the process of expropriation of land by non-agriculturists, and increased the agricultural proletariat burdening the land. Preventive measures in the form of legislation, such as we have discussed, will not solve the problem. It has been urged that co-operative farming on a voluntary basis may succeed where legislation of a preventive character may fail. It might be safely stated, however, that even compulsory co-operative farming within the limits of the present socio-economic structure, with all the aid that it can receive from the State in matters of seeds, implements and credit, cannot cope successfully with the problem of our deficit agricultural economy, so long as our agriculture continues to be dependent on competitive prices.

If instead of resorting to measures of a halting character, we consider the possibility of a redistribution of land with consolidated holdings and co-operative large-scale production, such measures may have revolutionary implications, involving a prolonged struggle with vested interests, ranging from the money-landers to the feudatory and absentee landlords, not to mention the sentimental attachment to the land of existing owners and to the laws of Inheritance and Succession, we are faced with a dilemma which it is difficult, if not impossible, to resolve. The choice lies between drastic and radical measures planned with a view to bring about reconstruction of our social and economic organisation, or a continuance of the present drift, with sporadic attempts at halting reforms which may end in a grave agricultural crisis followed by a violent revolution. As J. S. Mill has observed, "When the object is to raise the permanent condition of people, small means do not merely produce small effects; they produce no effects at all."

Land reform in India has its own enormous difficulties.

The conversion of grass land into cultivable land in our desire to increase production may result in the more rapid depletion of the soil fertility. The employment of Western methods and machines without taking account of local conditions could harm the soil instead of improving it. Nothing would be gained in agricultural production that resulted in the saving of man-power, a result which would throw our entire rural economy out of gear. The use of gas or oil burning machine may rob the cultivator of his bullocks and the manure they yield. Co-operative farming by small and uneconomic landholders seems to be a more hopeful device, if only the pressure of population on the soil could be relieved by the development of small-scale and cottage industries. It must not above all be forgotten that religion and moral philosophy throughout history have played an extensive vital part in determining standards of living. If any measures to raise the standards are to be successful, they must not only transform the economic and social structures, but demonstrate effectively the necessity of abandoning religious beliefs and practices which are prejudicial to the improvement of living standards.

CHAPTER XII

RURAL DEBT AND DEBT LEGISLATION

It has been often pointed out that we have in India a deficit agricultural economy. Agriculture which absorbs about 70 per cent of the total population is for them "a way of life" rather than a factor in the economic set up of the country, and in spite of the revolutionary changes that contact with the rest of the world has brought about the cultivator still clings to his own ways, most of them trying to eke out a living from their small plots.

An important element in this system that reduces the cultivator's income is the ever present burden of debt to the sowkar who exploits him in two ways—by charging exorbitant rates of interest on his advances, and defrauding him while acting as his marketing agent. The farmer, thus, has to pay a heavy rate of interest and gets a low return for his produce.

The cultivating classes all over the world incur debts, due to their short and long terms requirements which they cannot meet from their limited resources. What marks the indebtedness of the Indian cultivators from that of Western farmers is,

that whilst the latter's debt is mostly for productive purposes, that of the former is largely unproductive. This, coupled with all the burdens under which Indian agriculture has to work, makes the problem of debt a serious problem. The economic changes that followed the establishment of British Rule in India gave a new significance to the problem of indebtedness. The abeyance of ancient laws and customs which regulated the village economy and social relations and the substitution of a cash nexus increased the hold of the money-lender. The rigidity of impersonal law took the place of personal relationships. The size of debt has grown with the progressive deterioration in the economic condition of the cultivating classes. Sir E. Maclagan observed in 1919 that "it is acknowledged that the indebtedness has risen considerably during our rule, and more especially during the last half century. The reports received from time to time, and the evidence of annual sale and mortgage data show clearly that there has been a very considerable increase of debt during last half century."[1]

Size of Debt

That the volume of agricultural indebtedness is steadily growing was pointed out long ago on abstract grounds based upon the general characteristics of this indebtedness. The Provincial Banking Enquiry Committees confirmed this belief on statistical data. The Punjab Banking Enquiry Committee observed that the total agricultural debt in the Punjab increased from 90 crores in 1921 to 135 crores in 1929. The agricultural depression that started in 1929 subsequently increased the rural debt of India by 50 to 100 per cent. The resurvey of the Faridpur District in Bengal in 1933-34 by the Bengal Board of Economic Enquiry after a quarter of a century (the first was carried out by J. C. Jack in 1906) showed that 16.9 per cent of the families were free from debt, whereas 55 per cent were free at the time of the first enquiry. The figures given by Darling revealed the same story of the growth of indebtedness. If these figures can be relied on, they show that four-fifths of the peasantry were in the grip of money-lenders. Between 1921-29, the rural debt of the Punjab increased by 50 crores. The debt per cultivated acre in 1929 amounted to Rs. 45 and per head of dependants on agriculture to Rs. 104. The catastrophic fall in prices in 1929

1 Cf. "Before the country came under us, no sowkar, guzar, etc., could have dared to treat the Bhil as they do now, but these people take advantage of our rule to oppress and make slaves of those they formerly feared." Captain Wise in a report on Khandesh Bhils, 1874. quoted in the Report of the Congress Agrarian Reforms Committee, 1951, p. 85.

nearly doubled the real burden of debt. The report of the Agricultural Credit Department of the Reserve Bank of India estimated the indebtedness in terms of commodities at Rs. 1,800 crores in 1937.

As early as 1875, a commission appointed to enquire into the cauees of the agrarian riots in the Deccan examined the question of the causes responsible for agricultural indebtedness. Later on, Nicholson in Madras enquired into the same problem, and arrived at practically the same conclusions. Still later, the Provincial Banking Enquiry Committees undertook a detailed investigation into the causes of agricultural indebtedness, and their conclusions were in agreement with the conclusions of Nicholson.

Dr. Radhakamal Mukerjee supplies the following statistics showing the state of indebtedness in different parts of India as judged by intensive enquiries in different villages:—[1]

Year	Locality	Free of Debt
1888	Agra District Tenantry	22 per cent
1894	Nagpur (18,000 tenants)	40 „ „
1901	Baroda State	Nearly 40% of all landowners
1907	Faridpur (Bengal)	55 per cent
1918	Chhindwara (C.P.)	28 „ „ of all resident tenants
1919	Mysore State (24,350 co-operators)	37 per cent
1923	Punjab	17 „ „
1925	Murshidabad (Bengal)	12½ „ „
1926	Jessore (Bengal)	20 „ „

The amount of average indebtedness in different parts of India is indicated in the following table:

Year	Locality	Amount of Debt
1896	9 villages in Sialkot, Gujranwalla and Shahpur (Thoburn's enquiry)	Rs. 562 per indebted owner
1918	43,733 proprietors (a)	Rs. 463 „ head
	(Darling's enquiry) (b)	Rs. 385 „ owner
1875	12 villages is Ahmednagar	Rs. 371 „ occupant
1907	Faridpur District	Rs. 121 „ indebted cultivator
1913	Baroda State	Rs. 450 „ indebted holding
1917	Pimpla Saudagar Village (Deccan)	Rs. 225 „ indebted family
1918	Ajmer, Merwara (10,779 co-operators)	Rs. 379 „ co-operator
	Chhindwara	Rs. 112 for ordinary tenants
1919	Bengal (4,000 co-operators)	Rs. 120 per co-operator
1919	Mysore (24,350 co-operators)	Rs. 273 „ indebted co-operator

We also provide below a table showing estimates of agricultural debt made in different years for different provinces:—

1 "Land Problems of India," 1933, pp. 274-5.

Various Estimates of Rural Indebtedness

Estimated by	Year of Enquiry	Amount of indebtedness in rupees	General Remarks
The Deccan Riots Commission	1875	371 per occupant	Based on analysis of 12 villages in the Ahmednagar district (Bombay); one-third occupants of Government land in debt; debt averaged 18 times the assessment.
The Famine Commission	1880	——	One-third of landholding class in deep debt; another one-third in debt; but with power to redeem debt.
Sir Frederick Nicholson	1895	45 crores	Of Madras only.
The Famine Commission	1901	——	One-fourth lost their land in Bombay. Less than one-fifth free from debt.
Sir Edward Maclagan	1911	300 crores	For British India on the basis of Sir Nicholson's estimate for Madras.
M. L. Darling	1925	600 crores	Based on the Punjab figures of 90 crores; 19 times the assessment, but taking 17 as the multiplier.
The Central Banking Enquiry Committee Report	1929	900 crores	Based on Provincial Banking Enquiry Committee Reports.
P. J. Thomas[1] Agricultural Credit Dept.	1939	1,200 crores	———
Report	1937	1,800 crores	———
Bombay (including Sind)[2]	1929	81 crores	15 times the assessment. Average debt per land holding family Rs. 570 and per landless family 189; percentage of families free from debt, 21 in N. Gujarat, 23 in S. Gujarat, 29 in Konkan and 13 in Sind.
Madras	1929	150 crores	19 times the assessment.
Bengal	,,	100 crores	Average debt per family Rs. 160.
United Provinces	,,	124 crores	———
Punjab	,,	135 crores	27 times the assessment in 1929 as against 19 times in 1921; growth of 50 per cent in 8 years. Average debt per agriculturist Rs. 104 in 1929 as against 76 in 1921.

1 "If the total agricultural debt of British India was about Rs. 900 crores in 1928-9, it must have increased to about 1200 crores by 1933, and the real burden must be tantamount to Rs. 2200 crores assuming fall in price by 50% between 1929 and 1933." (Rural Indebtedness by P. J. Thomas in "Economic Problems of Modern India," Vol. I, 1939, p. 176).

2 All the estimates that follow are estimates made by the Provincial Banking Enquiry Committees.

Estimated by	Year of Enquiry	Amount of indebtedness in rupees	General Remarks
Bihar and Orissa	1929	155 crores	Rs. 129 crores for ordinary cultivator, Rs. 24 crores for landlords and Rs. 2 crores for other householders.
C. P. and Berar	„	36½ crores	Rs. 227 per family.
Assam	„	22 crores	21 times the assessment; only 15 per cent of families free from debt.

In view of the unsatisfactory character of our statistics it is not possible to say how far these estimates of rural debt are reliable,[1] but they reveal a definite trend towards increasing indebtedness. There is no doubt that the years of depression must have tremendously increased the burden of the debt, as the prices of agricultural commodities fell very sharply but the costs remained unchanged.

World War and Rural Indebtedness

There seems to be a widespread belief sedulously propagated by big business that the rise in prices, specially of agricultural commodities during the war and post-war period, has led to a shift in the distribution of national income from urban to rural areas through agricultural prosperity, and that this has largely benefited the cultivating classes.[2] Accordingly, we are told that there is no debt problem at all today. This belief has been so widespread that the Planning Commission in their first Five Year Plan do not make any reference whatsoever to the problem, as if it were non-existent.[3]

No reliable data are available regarding this so-called agricultural prosperity. There are, however, a few enquiries the results of which shed some light on the subject. One such enquiry into rural indebtedness was carried out by Dr. B. V. Narayanaswami Naidu in Madras[4] by the method of random sampling. "Notwithstanding favourable war-time factors, the rural debt of this province has stubbornly stayed at the high level of about Rs. 217.7 crores which is about Rs. 14 crores in excess of what Mr. W. R. S. Sathianandhan had computed in

1 The Gadgil Committee on Agricultural Finance do not regard the estimates of debt made by the Banking Enquiry Committees as reliable.

2 See Fiscal Commission Report, 1949-50, p. 203 and Rural Banking Enquiry Committee Report, 1950, pp. 30-39.

3 We must not gloss over the dangers of this ever present and growing debt of the agriculturist which "robs him of the full fruits of the labour, saps his initiative, destroys hope, and with it ambition, and darkens the whole outlook of his life." ("The Indian Peasant," by Marquis of Linlithgow, p. 3, quoted by Rangnekar, "Agricultural Finance in India." 1952, p. 92).

4 Report of the Economist for Enquiry into Rural Indebtedness, 1946, Government Press, Madras.

1935. The decade that has elapsed since then was a period of economic recovery, culminating in war-time boom. More congenial circumstances for the clearance of debt have hardly occurred at any time in the past. Yet the debt has not shown any substantial fall; that it is still 22.5 times as much as the Government assessment is a matter for serious consideration."[1] The total debt in Madras was estimated at Rs. 150 crores in 1930. It increased to Rs. 271.9 crores in 1939. The 1945 figure of Rs. 217.7 crores would indicate a reduction by 20 per cent; but as compared with the amount of the debt in 1930 there was an increase by about 45 per cent.

Dr. Naidu divides the agricultural population into five classes: (a) landless labourers, (b) tenants, (c) small landholders who own under five acres, (d) medium landholders who own between 5 and 25 acres, (e) big landholders with 25 acres and over. The first two classes of landless labourers and tenants, "the lowest among the agricultural hierarchy," increased their debt, thus worsening their economic position. The small landholders received the least benefit, whilst the big landholders reduced their debt.

The following tables show the *per capita* debt classwise:

Per capita debt for each class

Class	1939 in crores of Rupees	1945 in crores of Rupees	Percentage Rise or Fall
I	188.5	113.3	—39.9
II	78.8	59.4	—24.6
III	42.8	37.6	—12.3
IV	20.5	21.3	+ 4.1
V	5.7	8.3	+45.6

Percentage of five classes in 1939 and 1945

Class	1939 (1)	1945 (2)	% of 2 to 1
I	14.4	10.8	60
II	43.5	41.0	70
III	35.3	38.7	88
IV	5.4	7.0	104
V	1.4	2.5	143
	100	**100**	**80.1**

Classes II and III consisting of medium and petty holders, are between them responsible for 80 per cent of the total rural debt. Only the rich landholders appear to have benefited, and the benefits received during the war-time boom "varied not according to the need, but according to the size of the holdings."[2]

1 *Ibid*, p. 57.
2 *Ibid*, pp. 42-3.

The Congress Agrarian Reforms Committee concludes from the statistical data based on the personal investigations of Prof. Vir Bahadhur Singh in 1945 into representative regions in U.P. that "by and large the agricultural community has not gained any advantage from the war-time boom and though the real burden of indebtedness might have been reduced, the money burden has not been reduced."[1]

On the question of the impact of war-time boom on rural debt, the Gadgil Committee concluded on the basis that the outstanding advances made by Government in 1944 were lower than in 1939, that overdues of co-operative credit societies were reduced substantially, that advances made by them were smaller than before the war, and that amounts of repayments were considerable, "it might be possible to hazard the opinion that the total indebtedness in terms of money stood in 1944 at a level lower than that in 1939; but that, at a later date, forces were already in operation leading to an increase in the amount of this total indebtedness. The upward trend in the prices of agricultural products appeared to be held in check. The rise in the level of agricultural costs had mostly caught up with increase in the prices of agricutural products and had in some instances even passed it."[2]

The Famine Enquiry Commission believe that there was a sustained reduction in indebtedness between 1942 and 1945, espepecially in the case of big and medium landholders, but that the indebtedness of small holders might not have been reduced substantially in many parts of the country.[3] On the basis of repayments to co-operative societies and land mortgage banks and the trend in the values of mortgages registered annually, it is sought to be proved that there has been a great reduction in rural debt. It is likely that the debt decreased in volume in 1944, but since then it has been on the upward trend. Even the Rural

1 Report, p. 91. Cf: "The war-time profits filled mostly the pockets of the industrialists, the wholesale and retail trader, the middleman and the contractor, while in rural areas the agricultural classes suffered ...... an actual diminution in their real income." B. S. Mavinkurve, "The Myth of Agricultural Prosperity," Indian Socialist Party Bulletin No. 1, 1948, p. 13.

2 Report of the Agricultural Finance Sub-Committee, Government of India, pp. 7-8. Cf. "In the Sarvodaya Area of Ratnagiri District, Bombay, the number of indebted families increased by 15 per cent at the end of 1948 as compared with the beginning of the year, and the debt per family increased by 16.7 per cent. In Mysore, the total debt increased from Rs. 56.07 lakhs in 1941 to Rs. 76.98 lakhs in 1945 or by 37.3 per cent. In Bengal, the percentage of families indebted rose from 31 4 in 1943 to 60 in 1946, while the debt per family rose from Rs. 87.6 to Rs. 158.0."...... "The loan transactions of the Agricultural Credit Societies and land mortgage banks showed that........fresh advances went up by nearly 21 per cent over the pre-Partition figures." Thirumalai, "Post-War Agricultural Problems and Policies in India," 1954, p. 186.

3 Report, 1945, pp. 299-300.

Banking Enquiry Committee observe that since 1945 "fresh borrowings as well as outstandings have tended to increase rapidly."[1] It has also to be remembered that higher prices in agricultural commodities could have benefited the big landholders, but so far as the average ryot is concerned he has too small a plot of land to get relief from the co-operative movement.

According to Dr. G. D. Agrawal, who investigated agricultural debt in the case of 1088 families in 14 villages of the U. P., while there was a decrease in the number of indebted families and the total amount of debt in 1949 in comparison with 1939, the average debt per family increased in all the groups of land holders.[2] The investigations carried out in the Karnatak and Deccan regions in Bombay Province showed that the debt of the small holders actually increased in these regions. The long term loans by primary Land Mortgage Banks which declined from Rs. 59.44 lakhs in 1938-39 to Rs. 24.81 lakhs in 1942-43 increased to Rs. 75.87 lakhs in 1948-49. Repayments which reached the peak in 1942-43 at Rs. 37.98 lakhs fell to Rs. 29.80 lakhs in 1948-49.[3]

It is difficult to arrive at an estimate of the total all-India debt on the basis of the Madras Enquiry in view of different conditions prevailing in different States. But if the same proportion of debt in relation to population is applied to the whole of India the total rural debt in 1945 would work out at Rs. 1,300 crores, and making allowance for the loss of areas to Pakistan and ignoring differences in conditions of different States, the estimate for all-India would be round about 1,100 crores.[4] The First Report of the National Income Committee estimate the rural debt at Rs. 913 crores, of which about 83 per cent is non-productive, and only 5 per cent of which is supplied by Co-operative Societies. The interest on this debt is estimated at Rs. 86.5 crores.[5] S. Thirumalai thinks it safe to assume that the debt position is at the same level as in 1937, roughly Rs. 1,800 crores.[6]

When we take note of the fact that the cost of cultivation and of living of the agriculturist has risen more than in proportion to the rise in agricultural prices, that the area under multiple crops in our country is very small, that the farmer is not self-sufficient in regard to food and other agricultural products, and

1 Report, p. 36.
2 "Reorganisation of Agricultural Credit," 1952, p. 89.
3 D. K. Rangnekar, op. cit. p. 75.
4 *Ibid*, p. 74.
5 Report, 1951.
6 Op. cit., p. 186.

that as a result the war-time boom instead of being a source of prosperity to the average cultivator has brought him into greater difficulties, further that the agricultural labourer could gain nothing by a rise in wages, except when paid in kind, we shall have to conclude that the debt has not been reduced[1]. Finally, it is necessary to take note of the concentration of agricultural income in fewer hands. The Rural Banking Enquiry Committee observe: "A fairly large proportion of the total agricultural income has gone into the hands of this small minority (forming less than 20 per cent of the agriculturists) and the benefit of debt reduction has largely accrued to this class."[2] Taking the lowest figure given by the National Income Committee, we would not be wrong in stating that in spite of changes that have occurred in the last few years since the estimate made by the Central Banking Enquiry Committee in 1930, the rural debt position remains what it was twenty years back.

Causes of Indebtedness

A characteristic feature of this agricultural debt is its hereditary nature. The debt is handed down from generation to generation. The son has often to borrow in order to pay the interest charges on the amount borrowed by his father. Under the joint family organisation, the debt incurred by the head of the family is not a personal debt which becomes extinct on the death of the borrower, but is attached as it were to the property, and is passed on from father to son.

In the second place, the interest charges which the borrower has to pay have necessarily to be high. The only available source of credit to the cultivator sunk in poverty is the village marwari or the sahukar who knows the difficulties of the borrower, the paucity of the chances of repayment, and difficulties in the way of his enforcing such repayment. Although the village moneylender has in the past performed a valuable economic function in the life of the village, his activities have now become anti-social. With the abeyance of the old village custom of Damdupat, which prohibited him from receiving more than double the sum originally lent, he often charges exorbitant rates of interest, mani-

1 Congress Agrarian Reforms Committee Report, pp. 91-92. Cf. Prof. C. N. Vakil observes: "With small un-economic units of cultivation and a major dependence on the vagaries of monsoon farming operations in our country are on such a subsistence level that the average Indian farmer has comparatively small marketable surplus to realise large gains as a result of boom conditions in food prices." (Foreword to "Myth of Agricultural Prosperity," op. cit.). We hope that the report of the Rural Credit Survey Committee will give us reliable data regarding the influence of the War on rural debt and its present position.

2 Report, p. 40.

pulates accounts, and ultimately deprives the agriculturist of his land.

Thirdly, in a country where agriculture is a gamble in the rains, and where one out of every four or five years may be a year of scarcity if not of famine conditions, the cultivator who barely makes a subsistence when the harvest is plenty, is inevitably compelled to borrow in a year of scarcity. Frequently his seeds may rot, his cattle may die, he may need renewal of agricultural implements or repairs to his village hut; all these are occasions for resorting to the village money-lender, the only person who can help him in his hour of need. There are other and less frequent occasions when the cultivator has to borrow for the performance of ceremonies like marriage or death, or the arrival of a new child, occasions when he is said to be unnecessarily extravagant, spending thoughtlessly and lavishly to keep up social prestige in the eyes of his fellow villagers. In these materialistic times, the East has scarcely a chance of being understood on occasions like these, when the grateful human heart struggles to express its sense of gratitude to the Gods without counting the money cost.

Fourthly, in considering the causes of indebtedness the heavy burden of the land assessment, which is a primary charge on the crop and on the land, has to be taken into account. The assessment demands can only be met by borrowing, not only when the rains are timely and the crops abundant, but even when there is a failure of the crops—an eventuality of regular occurrence once every few years. An agricultural population which lives on subsistence level cannot help regularly borrowing every year on the occasion of paying the first instalment of the agricultural assessment, which is usually collected at the time when the harvest is not yet gathered and marketed. As a matter of fact, long before the harvest is marketed the crop is pledged to the money-lender, who may thus deprive the cultivator of the prospective benefits due to marketing under more favourable conditions.

Fifthly, whether in the Zamindari tracts or in the Ryotwari areas, wherever sub-letting is practised, the presence of a large and increasing body of middlemen having interest in land adds to the burden of the small farmer affecting his volume of indebtedness. We must add to these considerations one more, namely. the increasing land hunger which makes large numbers of landless people borrow money for the sake of purchasing an uneco-

nomic holding—the only alternative to starvation.

The Banking Enquiry Committee pointed out that it was very rarely that the cultivator borrowed from the village money-lender for the purpose of improving the land. The Committee noticed that this indebtedness of the agricultural class led to the transfer of land to the money-lenders and contributed to the creation of an ever increasing landless proletariat.

When we look at the problem of agricultural indebtedness as a whole, it is not so much the volume of the debt that engages our attention as the circumstances under which it has grown during the last few decades. The village marwari and the mahajan have been centuries old institutions. They helped the economic life of the cultivators in the long past without creating the serious problem of the present day. To ascribe the rural indebtedness to factors like improvidence and love of litigation, and to cavil at the poor agriculturist on the ground that he is thriftless, implies confusion in understanding the problem of indebtedness. If the agricultural debt is a symptom of a serious economic malady today, it is because, in the first place, the cultivating classes are shouldering the debt on fragmented farms which even experts cannot work at a profit, and which cannot yield even mere subsistence. In the second place, the rapidity with which the debt is growing can be accounted for in the context of the whole agricultural economy which, whilst it remains an economy of the subsistence type, has been tied to the apron-strings of the world market and world prices. But whilst the cultivator has thus been drawn into whirlpool of world prices, he has been neither supplied with the organisations nor the credit facilities which are within the reach of the farming classes, in countries like the U.S.A., Canada, Denmark and Germany. The ryot used for centuries to a subsistence economy is surrounded by powerful organisations of buyers, who make it difficult for him to obtain a fair price for his produce. What is worse, he cannot hold on to his crop even in times of plenty, mainly due to lack of proper crelit facilities.

Analysis of Objects for which Debt is incurred

Madras Province may be taken as a typical illustration of the rapid growth of agricultural debt. Nicholson estimated the total debt of the Province in 1895 at Rs. 45 crores. The Banking Enquiry Committee in 1930 estimated the total standing debt at about Rs. 150 crores and the debt from year to year at about Rs. 70 crores. Mr. Sathianathan, an I.C.S. officer, in a report

in 1934 on the question of rural indebtedness estimated the total debt at Rs. 200 crores. Mr. Sathianathan's detailed surveys based on an enquiry into 140 selected villages, disclosed that the purposes for which the debt was incurred might be classified as below:—[1]

Purpose	Percentage
Payment of prior debts	25.1
Purchase of land	13.8
Trade	12.9
Marriage and other ceremonies	10.5
Agricultural expenses	10.0
Building of houses	5.6
Relief of distress	6.1
Improvement of land	4.4
Payment of land tax	3.3
Education of children	1.4
Other purposes	6.9
Total	**100.0**

Similarly, the debts of 52 families of Karimpur Village, Bogra District, for 1928-29 show the following causes of indebtedness:—[2]

Purpose	Percentage
For payment of old debts	14.3
Purchase of cattle and capital and permanent improvements	40.0
For land revenue and land	21.1
For cultivation	16.1
For social and religious purposes	5.5
For litigation	0.6
For other purposes	2.4
Total	**100.0**

A survey of some villages in the Cuddalore Taluka conducted by Dr. Narayanaswami Naidu and Mr. P. Vaidyanathan gives us the purposes for which the debt (50 families) was incurred as under:—

Purpose of Borrowing	Percentage
Ancestral debts	53.0
Agricultural expenses	13.7
Trade	5.2
Domestic expenses	5.3
Marriage and social functions	7.9
Buying land	1.6
Other purposes including payment of land revenue which forms a big proportion	13.3
Total	**100.0**

The authors of the survey observe: "To certain extent the incidence of land revenue influences indebtedness. This is true

1 Quoted in the Report of the Committee on Co-operation in Madras, p. 73.

2 Percentages are calculated from the figures given in the Bengal Provincial Committee Report, p. 72.

especially during the depression when there is a fall in prices and the value of money has increased. The half net theory of the Government according to one writer has become the 'all net theory' .... It is usual to exaggerate the expenses on marriages .... The percentage of this kind of debt compared with others is very low."[1]

The tables that we have given are useful as showing that love of litigation and social and religious purposes are not the most important amongst the objects for which the debt is incurred by the rural classes. The charges of improvidence and extravagance against the Indian peasantry are not borne out by these enquiries. The first of these tables shows only 11 per cent as debt incurred for marriage and other ceremonies while the last one only 8 per cent. The litigation figures given in the second table shows only 0.6 per cent as debt incurred for such purpose. These figures bear out the remarks of the Deccan Riots Commission in 1875: "Undue importance has been given to the expenditure on marriage and other festivals.... The expenditure forms an item of some importance in the debt side of the ryot's account, but it rarely appears as the nucleus of his indebtedness."

An investigation carried on by Prof. Vir Bahadur Singh in 1945 in U. P. shows that cultivators with 2.5 acres and less borrow 65 to 100 per cent for the purposes of food alone, and those with 5 to 7 acres borrow 75 to 95 per cent for food.[2] The I.L.O. Report on the Economic Background of Social Policy in Asiatic countries referring to the heavy burden of indebtedness on the rural population observes: "If the debts of the rural population were incurred primarily for the purpose of improving agricultural productivity, the growth and extensiveness of rural indebtedness would give no cause for alarm. In many Asiatic countries, however, the heavy rural debts have been accumulated chiefly as a result of borrowing to finance consumption."[3]

Measures for Relief of Debtors

Coming to a review of measures adopted in various provinces for the relief of indebtedness, the Madras Government undertook a number of measures after 1934: these measures may be classified under three heads:

(1) Measures of relief by reduction of capital. The Madras Debtors Protection Act of 1935 was intended for the pro-

1 *Indian Journal of Economics*, Vol. XIX, 1938-39, pp. 529-30.
2 Congress Agrarian Reforms Committee Report, p. 87.
3 Report, p. 36.

tection of borrowers below Rs. 500. It prescribed maximum rates of interest, and required creditors to maintain proper accounts. The Agriculturists Loan Act, 1884, was amended in 1935, and the Madras Government advanced in three years about Rs. 25 lakhs for loans for redeeming prior debts.

(2) The Madras Debt Conciliation Act, 1936, legislated for voluntary settlement of debts by Debt Conciliation Boards. Very little, however, was achieved by this Act.

(3) The Madras Agriculturists Relief Act, 1938, provided for a compulsory scaling down of rural debts through Civil Courts, by fixing the maximum rates of interest and writing off rent arrears. Between March, 1938, and July, 1940, Rs. 2 crores and 5 lakhs were scaled down and 48 per cent of the original debt was remitted. By 1950 though Rs. 10 crores of debt were scaled down, it formed only 4 per cent of the total indebtedness and benefited hardly 5 per cent of the total number of agriculturists.[1]

The Madras Committee on Co-operation, 1939-40, recommended a simple Rural Insolvency Act.[2] It also recommended statutory control of the professional money-lender, providing for compulsory licensing of money-lenders, maintenance of accounts, fixation of a maximum rate of interest and prohibition of compound rate of interest.

The Madras Committee summing up the situation with regard to indebtedness observed: "We are conscious that many of the measures already taken by the Government or recommended by us involve departures from the principles of freedom of contract and of the sanctity of formal undertakings. But we must place the prosperity of agriculture—which means the general prosperity of the country—above all other considerations. 'Agriculture as a producer of wealth, as an employer of labour, as a fine mode of life, as a provider of homes for men, as an industry which develops some of the finest qualities of those engaged in it deserves substantial and reasoned support' from the Government, Legislature and the public."[3]

(b) Punjab

The history of legislation on money-lending in the Punjab also warns us against too optimistic a view of such legislation.

1 Thirumalai, op. cit., p. 189.

2 Cf. Agricultural Commission Report: "Just as creditors have the right to insist that all the debtors' assets should be impounded and applied towards the payment of the debts, so also the debtor who has given up all his assets should have the clear right to be allowed to earn his living if he can, and to be free to make a new start in life." p. 441.

3 Report on Co-operation, 1940, p. 96.

The Redemption of Mortgages Act, 1913, was followed by the Usurious Loans Act, 1918, under which courts were empowered to reopen a transaction provided it was substantially unfair between the parties and the rate of interest charged was excessive. The Punjab Regulation of Accounts Act, 1930, secured an improved system of keeping accounts and prescribed the methods in which accounts were to be maintained by money-lenders. The Punjab Relief of Indebtedness Act, 1934, provides for the constitution of Debt Conciliation Boards. The Punjab Debtors Protection Act, 1936, afforded immunity to certain kinds of property from being proceeded against in execution proceedings. The Punjab Alienation of Land Act as amended upto 1939 prevented the passing of the land from the hands of agricultural classes to the hands of the non-agricultural classes. The general effects of this legislation have not been pronouncedly very favourable. The number of money-lenders in the villages has decreased; their power has increased The value of land as security has decreased. Money-lenders have discontinued lending except to old clients. There has been a general shrinking of rural credit. One feels tempted to observe that legislation by itself can never solve the problem of indebtedness, and that debts are bound to grow with a deficit economy in the absence of a comprehensive planning for agricultural development.

Recent Provincial and State Legislation

On a general review of the legislative measures adopted in the provinces, it would appear that there have been four directions in which efforts have been made to handle the problem of indebtedness: (a) control of land alienation; (b) attempts to liquidate the old debt; (c) attempts to control the existing credit machinery; and (d) substitution of facilities for credit in the shape of co-operative societies.

(a) The Deccan Agriculturists Relief Act of 1879 was one of the earliest measures for dealing with the problem. and sought to prevent the alienation of land from the agricultural to the non-agricultural classes. A similar provision was embodied in the Punjab Alienation Act of 1900, subsequently amended in 1907 and 1938. The Bihar Money-lenders Act of 1938 exempted a minimum holding from sale in execution of decrees.

Measures for abolishing feudal landlordism have been taken in hand in U. P., Bihar and Madras. In spite of a lack of uniformity, broadly speaking they aim at granting security of tenure to the tenant by eliminating intermediaries. In U. P. cultivators

can acquire Bhoomidari rights on payment to the Government of an amount equal to ten times their existing rents. In the Punjab the Amended Act of 1938 prohibited any sale of land by an agriculturist in favour of a creditor, "but the tenants have derived little benefit from the legislation."[1] The money lender still enjoys a free hand, and landlords increase their possessions at the expense of the poorer peasantry. In Bombay, surveys reveal that even competent tenants fail to secure land or increase their holding. Landlords evict tenants to secure possession of as much land as is allowed by the law.

(b) The Insolvency Act of 1920 provided for the protection of debtors against arrest and imprisonment in cases where the debt amounted to Rs. 500 and over. The Punjab Relief of Indebtedness Act of 1934 and the Central Provinces Insolvency Amendment Act of 1935 reduced the amount from Rs. 500 to Rs. 250. The Bengal Agricultural Debtors Act of 1938 provides for a Board of Conciliation which may declare a debtor insolvent if his assets are not sufficient to repay the debt within twenty years. The certifying officer under the Act may also declare a debtor insolvent if he thinks that the overdue instalments cannot be recovered.

Debt Conciliation and Arbitration were provided for by the C.P. Debt Conciiation Act of 1933, and by similar Acts in the Punjab, Bengal, Madras, Assam and Bombay. These Acts provide for the settlement of outstanding debts through Conciliation Boards and the Registration of Agreements so as to give them the effectiveness of decrees. Certificates could be issued to the debtors making a fair offer to the extent of 40 per cent of the debt, and prohibiting interest in excess of the principal amount. In Bengal an element of compulsion is introduced and the Boards are authorised to impose a fair settlement in spite of the disagreement of the creditor, if the agreement has the accord of creditors to whom 40 per cent of the total debts are owed. The Bombay Agricultural Debtors' Relief Act, 1947, determines the paying capacity at 60 per cent of the value of the property of the debtor. The adjusted debt is to be paid to creditors by borrowing from a Land Mortgage Bank or a suitable agency, which will recover the loan from the debtors in instalments spread over a period not exceeding twenty years. If the debtor has no hereditary or transferable rights in land, and his debt exceeds his paying capacity by a proportion to be prescribed by law, the Board

1 D. K. Rangnekar, op. cit.

should adjudge him an insolvent. Even if with rights in land his debt exceeds his paying capacity by a proportion to be determined by law, the Board should adjudge him an insolvent. The Act fixes priorities for payment of debt: (a) debts due to Government charged on immoveable property belonging to the debtor; (b) debts similarly due to local authorities; (c) loans by Resource Societies; (d) secured debts, and so on.

Though complete statistics are not available relating to the whole of India, a measure of relief has been conferred on agriculturists as the result of the operation of the Conciliation Boards and Relief Acts.[1] The machinery of debt relief could only be invoked by the debtor. Debts due to Banks, Co-operative Societies and Government are excluded from the purview of many of the Acts. Moreover, the ignorance and poverty of the cultivators limit the benefits of the Acts giving relief. Added to this is another limiting factor, viz., the sanctimonious attachment to the land and the difficulties of paying the scaled down instalments on the part of the debtor. Finally, the debtor under the conciliation machinery finds that he cannot get fresh credit till he has completed his instalments.

(c) After the agricultural depression that started in 1929, most of the Provincial Governments have enacted Acts, limiting the rate of interest charged by money-lenders, recording terms agreed upon between the creditor and the debtor, providing for the registration of money-lenders and for the furnishing of accounts to the debtor. The following table shows legislative restriction of rates of interest in some of the Provinces:—

Province	**Name of the Act**	**Rate of interest per annum** Secured Loan	Unsecured Loan
Bengal	Money-lenders Act, 1933	15 per cent	15 per cent
Punjab	Relief of Indebtedness Act, 1934	12 ,,	18¾ ,,
Madras	Debtors Protection Act, 1934	9 ,,	15 ,,
U. P.	Usurious Loans Act, 1934	12 ,,	24 ,,
C.P. & Berar	Usurious Loans Act, 1934	12 ,,	18 ,,
Assam	Money-lenders Act, 1937	9½ ,,	12½ ,,
Bihar	Money-lenders Act, 1938	9 ,,	12 ,,
Bengal	Money-lenders Act, 1938 (cash loans)	9 ,,	25 ,,
	,, ,, (kind loans)	15 ,,	25 ,,
Bombay	Money-lenders Act, 1946	6 ,,	9 ,,

(d) As for the substitution of cheaper credit agencies in the place of the village money-lender, we shall consider the question in a separate section.

1 Rangnekar, op. cit., p. 108. In Bengal by March, 1944, a total debt of Rs. 50 crores was reduced by 64 per cent to Rs. 18 crores. In Madhya Pradesh debts of Rs. 15.6 crores were scaled down by Rs. 7.7 crores. In the Punjab during one year ending 31st December, 1940, debts of Rs. 91.45 lakhs were scaled down by Rs. 55.6 lakhs. (Agricultural Finance Sub-Committee Report, p. 12).

Review of the Working of Debt Legislation

(a) The brief references that we have made to the legislation undertaken by the Provincial Governments indicate, in the first place, that these Governments have endeavoured to scale down the debts by setting up Debt Conciliation Boards on a voluntary basis, and in recent years have legislated for a compulsory cutting down of principal or interest. The Debt Conciliation Boards have achieved substantial results in some States. In Bengal, the amount of debt disposed of through the Conciliation Boards till 1945 formed 18.9% only of the total debt, whereas in the U. P., the amount wiped off till 1945-46 was Rs. 7.1 crores, i.e., about 29.6% of the total debts dealt with. In Bombay, the indebtedness reported to the Debt Adjustment Board represented only a part of the total indebtedness of a group of agriculturists eligible to apply for relief.[1] It has been pointed out by way of criticism that the high limits on debts which could be conciliated (Rs. 50,000 under the C. P. Act and Rs. 15,000 under the Bombay Act) conferred benefit on a type of debtors who ought not to get any relief.

In the second place, the absence of facilities for repayment of the decretal amounts in cash hampers the successful working of the Debt Conciliation Boards. Wherever, therefore, we are told there are Debt Conciliation Boards it is desirable to establish Land Mortgage Banks which can take over the liabilities of the agricutural debtors. The work done by the Government of Bhavnagar State (now merged in Saurashtra) in this connection is commendable. That Government based its scheme of debt redemption on the principle that the maximum annual repayable amount by an agricultural debtor should not exceed three times the annual assessment payable by him. The State, therefore, undertook to help the debtors to repay their dues.[2]

Thirdly, the C. P. Land Revenue Report, 1937, pointed out that under the Debt Conciliation machinery the debtor finds it difficult to secure fresh credit until the last of his instalments is paid. It is necessary, therefore, that the Debt Conciliation Board take into account the repaying capacity of the debtor after he has provided for the maintenance of his family, rents and taxes, his dues for the repayment of short-term funds and for the next year's cultivation needs.

(b) Provincial Governments have also sought to regulate existing credit agencies by Money-lenders Acts. Most of these

1 Thirumalai, op. cit. p. 189.
2 Agrarian Reforms Committee Report, p. 95.

Acts provide for compulsory registration and licensing of money-lenders, fixing of maximum interest rates, maintenance of accounts, periodical statement of accounts to debtors and furnishing of receipts. It is desirable to have uniform legislation in this connection for all the States. Registered money-lenders could be linked up with the Reserve Bank of India and granted rediscount facilities on the same terms as banks. The enforcement of maximum rates of interest is always attended with difficulties. It has been said that the main purpose of such legislation is educative rather than preventive.[1]

(c) The third task to which the Provincial Governments addressed themselves was the enactment of safeguards for protecting the person and property of the agricultural debtor. Some provinces like Bihar, Bombay and Bengal provide that a minimum portion of the land and dwelling house of the debtor should be exempt from attachment or sale. In the C. P., Bombay and Bengal, molestation of the debtor by the creditor for the recovery of dues is made a criminal offence. The Punjab Restitution of Mortgaged Lands Act, 1938 provided that a mortgagor should be entitled to seek restoration of his mortgaged land through a court where land was in the possession of the martgagee for a length of time which enabled the latter to secure the repayment of his principal over and over again.

Reviewing the effect of debt legislation, Dr. Agrawal observes: "The compulsory heavy reduction in debts as provided for in the more recent debt legislation has greatly shaken the confidence of the creditors."[2] The Agrarian Reforms Committee observed from their investigations into debt legislation: "We can safely say that the laws for restricting the operations of the money-lender have completely failed."[3] The Famine Enquiry Commission of 1945 noted that such legislation had led to a contraction of credit, and the Rural Banking Enquiry Committee, 1950 endorsed this view. The combined effect of the woking of the Acts for debt adjustment and control of money-lending "has been to dry up the normal sources of credit for small agriculturists." It has even been suggested that the reduction in the quantum of credit supply may have contributed

1 Cf. "Large landholders can raise loans, due to approved security at rates varying from 9 to 12 per cent in most provinces. But in the case of small cultivators who constitute the bulk of the debtors, rates charged ...... may be upto 300 per cent. The rate of interest charged per annum on grain loans is generally 50 per cent, but rises upto 100 per cent in several cases." ("Economic Background of Social Policy," I. L. O. 1947, p. 46).

2 Op. cit. p.128.

3 Report, p. 96.

to the deterioration in the standard of cultivation.[1] Stringent regulation of money-lending and rates of interest cannot help the ryot, so long as the money-lender enjoys a monopolistic position. There is invariably a drying up of credit, or evasion of law by collusion between the borrowers and lenders. Even in the U.S.A. it has been found that "legislative restriction is not the only method of meeting the problem; and the economic competition, if effective, is a far more satisfactory solution. The low rate lender, if his facilities are adequate and his terms constructive, can drive out the high rate lender."[2]

It has to be remembered, however, that even comprehensive debt legislation such as the Provincial Governments have undertaken during the last twenty years, cannot solve our agricultural problem unless it is supplemented by measures which can effect far reaching improvements in agricultural production.[3]

The debt of the cultivating classes is but the symptom of a deeply rooted disease. The legislation that we have briefly reviewed may be regarded as of the nature of ambulance work, stopping the bleeding and the source of further infiltration of the disease, by applying antiseptics and bandaging whilst leaving untouched the roots of the disease. Legislation for scaling down the debt or restricting the activities of the money-lenders will not cure the disease; nor will the fixation of a maximum rate of interest, or a system of registration and compulsory keeping of accounts touch the roots. An effective co-operative movement reaching every village in its activities, and backed by such financial resources as the total national assets of the country can provide, may be capable of solving the immediate problem. But, as we shall see, no such hopes can be reasonably entertained with a co-operative movement of the kind that we actually have with us today.

It has also to be remembered that, with the growth of transferable rights in land, it is not the farmer but the money-lender who takes away the benefits of irrigation or the cultivation of commercial crops. Where land passes into hands of the money-lender who has no capacity for farming, the cultivator becomes a tenant-at-will on his own holding, leasing it from the money-lender at a rate which leaves him no incentive to improve the crop and with no credit on which he can borrow. A country like ours

1 Thirumalai. op. cit., p. 190. In Uttar Pradesh investigation in five villages showed that the number of non-agriculturist money-lenders and the average number of borrowers with each of them were reduced from 172 and 183 in 1936 to 38 and 59 respectively in 1949. (Agrawal, op. cit. pp. 128-29.)

2 Quoted in Agrarian Reforms Committee Report, p. 98.

3 For portions of this section. we are indebted to a valuable publication by Mr. N. G. Abhyankar on "Provincial Debt Legislation," (New Delhi), 1940.

with an enormous agricultural population runs a serious risk of aggravating its poverty under such conditions, with neither the will nor the ability to intensify production on the part of the rural classes. Not until the ryots are enabled to start on a clean slate by measures like the wholesale cancellation of existing debts (a *sine qua non* of all other measures) and get security with regard to their agricultural operations by the provision of regular credit facilities, by consolidation of holdings, by insurance of cattle against famine and disease, by the establishment of subsidiary industries, in short, by a many-sided and simultaneous attack on all the factors connected with their poverty, can there be a reasonable hope of better and more prosperous conditions for Indian agriculture.

Finally, the problem of agricultural indebtedness is intimately linked up with the larger question of economic development. Poverty, ignorance, absence of industrialisation, a static social organisation, deep rooted religious traditions, the uncertainties and insecurity resulting from fluctuations in world prices, all these are elements in a situation in which indebtedness and low agricultural productivity also enter. No solution of any one of these problems is possible, apart from a many-sided and comprehensive reconstruction of the corporate life of the country which will include all the elements.

CHAPTER XIII

ORGANISED AGRICULTURAL CREDIT

The principal unorganised sources of agricultural credit are private money-lenders and indigenous bankers. There is no reliable estimate of the number of money-lenders. A conservative estimate places it at between 300,000 and 350,000. The main problem with regard to these unorganised money-lenders is that of removing some of the methods of business to which they are accustomed or to eliminate them altogether by the substitution of alternative credit agencies. It has been acknowledged by all who have studied the problem that the money-lender cannot be dispensed with for years to come, and that it is far from desirable to deprive the cultivator of the existing facilities for credit long before other credit agencies are brought within his reach.

Amongst the organised forms of credit in India must be included in the first instance loans and aids provided by Government.

Government Loans and Advances

With a cultivating class sunk in poverty the provision for borrowing facilities necessarily plays an important part. India has been called a land where capital is supplied "in small sums by small capitalists to men of small commercial intelligence." There has been excessively wide borrowing, on the one hand, and excessively dear money on the other—the Indian agriculturist suffers equally from both these. The Government have endeavoured to make available to the rural classes other sources of credit besides the village sowkar or marwari. They have lent money themeslves, and they have organised the formation of Co-operative Credit Societies. Government loans known as taccavi are regulated by the Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884. The former Act authorises the grant of loans by local officers for making any improvement, improvement being defined as any act that adds to the letting value of the land. Wells take the first place among such works. Loans are repayable by instalments, and can be recovered as arrears of land revenue. The Agriculturists' Loans Act provides for loans for other purposes like relief of distress and purchase of seeds and cattle. The rate of interest is 6¼ per cent or less. But they entail formalities of all kinds and the repayment is enforced with great rigidity. It is also stated that the zeal of Government Officers in raising land revenue on account of general rise in prices and construction of new roads and railways has led to the taxation of improvements in land effected by private efforts with the help of taccavi advances. This has made the ryots reluctant to resort to taccavi, with all the proverbial delays of official red tape and the unnecessary enquiries by minor officials. In 1938-39, loans of about Rs. 1 crore only were advanced but under the Grow More Food Campaign, the advances rose to Rs. 15 crores in 1949-50. In order to increase the popularity of State loans, the Gadgil Committee has recommended the creation of a separate Department for the administration of the State loans which is at present under the Revenue Department.[1] In reality, there is the need to thoroughly re-examine the laws passed 70 years ago and amend them after fixing the nature and scope of State aid in relation to diverse needs of the agriculturists.

That the Act of 1884 should be confined in its operation to occasions of distress and that the system of Government loans

1 Report, p. 33.

is inimical to the growth of a healthy spirit of self-help are principles the merits of whose rediscovery were the privilege of the last Agricultural Commission. In a country where occasions of distress are the rule rather than the exception, and where more than anywhere else the poverty and helplessness of the agricultural population justify the abandonment of *laissez faire* principles, it was left to an Agricultural Commission as late as 1928 to declare and re-endorse the lingering creed of the 19th century.

Co-operative Movement

The other type of organised credit is co-operative credit. The Co-operative Movement in India has been a growth of the last fifty years and is largely dependent in its origins as well as development on Government. The movement is not confined to the agricultural classes, but it was with a view to their benefit that it was inaugurated and the great bulk of societies are still rural. Even before the year 1900 a striking development of the co-operative principle had taken place in Madras. Nidhis described as mutual loan funds had been started, with over 36,000 members with a capital of two and a half crores. Their clients were, however, the educated class rather than the men of the agricultural population. In 1901, the Government of India appointed a committee to consider the whole question in the light of experience gained in some of the provinces. The report of this committee indicated that no real advance was possible without legislation. The Co-operative Societies Act of 1904 laid down broad principles and empowered Local Governments to appoint provincial registrars. The object of the Act was "to encourage thrift, self-help, and co-operation among agriculturists, artisans and persons of limited means." Societies were classed as "rural" or "urban"; four-fifths of the members must be agriculturists in the first case and non-agriculturists in the second. Loan were to be made only to members or to a rural society. Provision was made for compulsory inspection and audit by the Registrar.

The rural societies were required to accept the principle of unlimited liability. Loans could be given to members on personal or real security. Profits were to be credited to a reserve fund or applied to the reduction of the rate of interest. The Registrars appointed under the Act were expected to start model societies and do propaganda work. The following table gives us an idea of the growth of societies upto 1911-12:—

Year		Number of Societies	Number of members	Amount of working capital in rupees
1906-07	..	843	90,844	23,71,683
1909-10	..	3,428	224,397	1,24,68,392
1911-12	..	8,177	403,318	3,35,74,162

The framers of the Act of 1904 were evidently confused in their thinking and mixed up two distinct objectives. On the one hand, it was thought that the movement which was inaugurated by the Act would meet the problem of agricultural indebtedness, remove the existing burden of the debt and prevent further indebtedness. In the explanatory memorandum appended to the original bill, Sir Danzil Ibbetson observed that enormous advantage would accrue to the cultivators if "they could be induced to utilise their combined savings under a system of co-operative credit, and so be freed even partially from the necessity of recourse to the professional money-lender." On the other hand, it was also thought that the movement would mobilise the scattered savings of the cultivators, would promote thrift, self-help, mutual trust and confidence, and would enable the cultivator to borrow on easy terms for his agricultural requirements from the combined resources of his own class.

The Act of 1904 made no provision for societies for purposes other than the supply of credit. It was based on the model of the Raiffeisen and Schulze-Delitsch banks of Germany. But long before 1904 the German co-operative movement had outgrown its original conception, and had developed into a co-ordinated system of rural finance. The establishment of primary credit societies in 1904 on the basis of the original Raiffeisen model might well raise doubts about the clarity of vision of the authors of the Act of 1904. Progress was to be achieved by a process of trial and error. Even the Agricultural Commission observed that it was a case of the "leaders of the blind being themselves among the afflicted."[1]

The co-operative movement was not the outcome of any popular demand. There was no public opinion to criticise or guide it. It was an attempt by the State to teach the people the advantages of self-help and thrift. A few years of the working of the Act were sufficient to show that the working capital of the societies then in existence was less than the rural indebtedness of a single taluka in many parts of the country. It was necessary, therefore, to replace the Act of 1904 by another Act which would provide not only for the formation of co-

1 Report, p. 444.

operative banks, regional as well as provincial, but also for the formation of societies of various types dealing with purchase and sale apart from credit. This was achieved by the act of 1912 which removed the limitations of the earlier Act. In spite of this, however, and the creation of scope for non-credit activities, credit continued to be the most insistent need of the agricultural classes and remained, therefore, the preponderating element in the co-operative movement.

The Act of 1912 legalised many co-operative societies which had hitherto no legal recognition. Societies were classified according as they were limited or unlimited. The registrars were expected not only to supervise but to spread the movement. With a poor and illiterate peasantry there were neither funds nor proper supervision for the development of the movement. The registrars in the flush of enthusiasm multiplied the number of societies which increased to 15,000 in 1914 with 695,000 members. A comprehensive resolution reviewing the progress of the movement was followed by the appointment of the Maclagan Committee which was asked to examine whether the movement was progressing on sound lines. The Committee examined the movement and made proposals of a far reaching character. In the result Provincial Banks were established in all the Provinces.

Further Growth of the Movement

On the passing of the Government of India Act of 1919, Co-operation became a provincial subject and was administered by the Provincial Governments. Three Provinces exercised the option given to them of enacting their own Provincial Act—Bombay in 1925, Madras in 1932, and Bihar and Orissa in 1935. The following table indicates the growth of the co-operative movement in the whole of India including Indian States since its inception:—[1]

Average		Number of Societies in 000's	Number of members in 000's	Working Capital in 000's of rupees
1906-10	..	2	162	6,800
1911-15	..	12	548	54,800
1921-25	..	58	2,155	363,600
1931-35	..	106	4,322	946,100
1936-40	..	117	5,077	1,046,770
1941-45	..	150	7,218	1,243,474
1946-47	..	139	9,110	1,560,057
1947-48	..	150	10,117	1,710,609
1948-49	..	164	12,707	2,194,916
1949-50	..	173	12,561	2,331,000
1950-51	..	181	13,700	2,750,000

1 The figures upto 1946-47 are for undivided India and subsequent figures refer to the Indian Union only.

There was a rapid growth in the number of Societies and working capital between 1920 and 1930. The movement was seriously affected during the great depression of 1930, as a result of catastrophic fall in prices, and lapsed into an unorganised state with overdue loans and arrears. Many of the primary and central societies had to be wound up during 1933-36. A large part of the funds was frozen. In 1937-38, the total overdues from members of agricultural societies amounted to Rs. 11.4 crores, whereas the total working capital was Rs. 32 crores. An investigation by Sir Malcolm Darling showed that upto the end of 1934, 24 per cent of the total number of societies started since the beginning of the movement had gone into liquidation, the percentage varying from 9 in Bengal to 49 in C.P. and Berar. As long ago as 1928, the Agricultural Commission summarised some of the fundamental weaknesses of the co-operative movement: "Members of societies delay payment even when able to repay; understanding of the principles of co-operation and knowledge of the essentials of rural credit are lacking; office holders refrain from taking action against defaulters, and the spirit of self-help is not as prominent as it should be if the movement is to be a live force in the village. Even where defects are obvious and admitted, there is reluctance, as dangerous as it is regrettable, to liquidate societies whose condition is beyond remedy."[1] The Central Banking Enquiry Committee emphasised the need for carefully scrutinising the economic purpose of the loan, and the repaying capacity of the borrower, in dispensing co-operative loans.[2]

When the Reserve Bank of India was established in 1935, it was asked to submit a report to the Government of India on the improvement of the machinery for dealing with agricultural finance and to maintain a special department for the study of all questions relating to agricultural credit. The introduction of provincial autonomy in 1937 was followed by legislation for the regulation of money-lending and rates of interest. This legislation is said to have brought about a contraction of rural credit. The cultivator, encouraged to look to popular governments for quick relief from the burden of debt, was not inclined to avail himself of the slower, more exacting benefits of co-operative finance. Since 1940, a new phase has started with

1 Report, p. 449.
2 Report, p. 133.

the development of multi-purpose societies.[1] Despite this, provision of credit still continues to be the dominant activity of the co-operative movement.

War and the Co-operative Movement

The movement recovered to some extent during the second world war due to rise in agricultural prices. There was an increase in the deposits of societies. The rich farmers repaid their dues. Between 1939 and 1946, the number of societies increased by 41 per cent, membership by 70.6 per cent and working capital by 54 per cent. The war-period saw a shift in emphasis in the co-operative movement from credit aspects to productive and distribution functions. Without affecting the importance of the credit function, there was a trend towards the development of multi-purpose societies. "In spite of the very substantial developments on the non-credit side, specially during the period of World War II, agricultural credit societies still continued to maintain a proponderant position. Credit societies constituted 66.4 per cent of the total number of primary societies in India in 1947-48, as against that of 72.7 in 1945-46."[2]

During the period of the war, as a result of economic controls, a number of consumers' stores and industrial co-operatives were organised. The latter contributed to the production of war requirements as well as civilian needs. In 1945, the Government of India appointed a Co-operative Planning Committee to draw up a plan of co-operative development. It was presided over by R. G. Saraiya. The Report, submitted in 1946, took stock of the whole movement, fixed targets to be achieved and recommended the lines of development. On the attainment of Independence in 1947, fresh problems arose bearing on the rehabilitation of refugees. Government rightly adopted a policy of helping the refugees through the formation of co-operatives. State aid in the shape of loans, cheap land, building materials and other concessions were freely made available, and housing, industrial and farming societies were encouraged. In addition, co-operative societies came into being for the distribution of manures, fertilisers and agricultural implements. The formation of multi-purpose societies created a larger demand for funds. The Planning Commission recognise the significance of

1 At the end of 1948, there were 18,162 multi-purpose societies with a membership of 5,77,000 and a working capital of Rs. 278 lakhs. (Rangnekar, op. cit., p. 136).

2 Review of Co-operative Movement in India, 1946-48, by Reserve Bank of India, 1950.

the co-operative movement when they observe: "The establishment of credit societies in villages is a *sine qua non* of the organisation of credit in the context of planned investment in the developmental schemes approved in the Plan."[1]

Structure of the Co-operative Movement

At the apex of the movement is the Provincial (now State) Co-operative Bank, which works both as a provincial financial body and as an agency for mobilising the surplus funds of other societies, like the Central Co-operative Banks and primary societies. The Provincial Co-operative Bank attracts deposits from the public, has a large working capital, and can obtain loans and guarantees from Provincial Governments. In 1950-51 there were fifteen such banks with a total working capital of 34.42 crores of rupees.

Below the Provincial Bank are the Central Co-operative Banks located in important centres, such as district head-quarters and centres of business, and the supervising unions formed by the union of a number of primary societies. The Central Co-operative Banks attract deposits from middle class and rich people and from member societies and lend only to the co-operative societies within their jurisdiction. They also guide and supervise the primary societies. In 1950-51 there were 505 Central Co-operative Banks with a working capital of Rs. 56.37 crores.

The primary societies are either agricultural or non-agricultural. Both the types comprise different classes, such as credit societies, sale societies, irrigation societies, etc. Credit societies in both the types form an overwhelming majority. The Agricultural Societies or the Raiffeisen Societies as we may call them, work on definite principles: (a) Only inhabitants of the particular locality can become members. (b) The working capital is supplied by Central Co-operative Banks. Very few primary societies have share capital. (c) Every member has individual and collective unlimited liability for all the debts of the society. (d) All profits are carried to a reserve fund. In some provinces a maximum of 25 per cent of the profits may be spent for the benefit of the public of the locality. (e) Loans are granted only to members, and that too only for productive purposes. The loans are for short terms varying from 6 months to a year. (f) The office-bearers are honorary workers. (g) Societies can accept deposits from non-members but cannot lend

1 First Five Year Plan, p. 166.

money to them. The other type of agricultural societies are few in numbers. The non-agricultural or the Schulze-Delitsch Societies draw their working capital by issuing shares to members, from deposits and from loans from Central Co-operative Banks. Loans are granted only to members, on the collective security of the borrower and two other members of the society. The liability of members is limited.

As regards the apex banks and Central Co-operative Banks, one has to keep in mind the fact that they act as the Central Financing Agencies for primary societies and considerably influence their working. The strength and success of the movement is, thus, dependent on the efficiency of these apex and Central Banks.

The following table is indicative of the present strength of the co-operative movement:—

Statistics relating to the Co-operative Movement[4]

	1949-50			1950-51		
	Numbers	Number of Members	Working Capital in crores of Rs.	Number	Number of Members	Working Capital in crores of Rs.
Provincial Banks	14	18,618[1]	30 45	15	20,932	34.42
Central Banks and Banking Unions	498	1,89,722[1]	49 87	505	2,07,074	56.37
Agricultural Credit Societies	116.534	48,17,545	25.22	1,15,462	51,53,907	40.96
Non-Agricultural Credit Societies	7,534	20,65,990	51 60	7,810	21,77,551	56.78
Multi-Purpose Societies	29.525[2]	15,07,801	7.55	—	—	—
Land Mortgage Banks	288[3]	1,95,201	14.73	—	—	—
Industrial Societies	5,934	5,53,624	5 98	—	—	—
Consumers' Stores (Wholesale & Primary)	9,034	21,76,468	—	—	—	—
Milk Societies & Unions	1,004	79,229	—	—	—	—
Marketing Societies	8,722	26,09,979	—	—	—	—

Reserve Bank Reviews

The Reserve Bank of India issued under the signature of the Deputy Governor a report in 1941, tracing the development of the co-operative movement to the end of June, 1940. It pointed out that the co-operative movement was passing through a crucial phase, and that the part played by co-operation in the building up of rural life has been disappointingly small, but that, in spite of its past failure, the movement can be developed so

1 These figures relate to individuals, as well as Banks and Societies.

2 Out of these 22,789 are in Uttar Pradesh alone.

3 Out of these 5 are Central Primary Land Mortgage Banks.

4 Figures are from India, 1954. The comparative figures for the other categories included in 1949-50 categories are unavailable, because of a change in classification. Figures for 1949-50 are from "Review of the Co-operative Movement in India, 1948-50, by Reserve Bank of India, 1952.

as not only to fulfil the function of providing cheap credit but also to become the chief instrument of rural reconstruction in India. The stagnation, if not the failure, of agricultural co-operation was due to two causes—the insecurity of agricultural incomes and their steep fall during the depression. The Review also stated that there was a third cause, namely, that the movement in India has failed to foster the true co-operative spirit of self-help and mutual help.

The Reserve Bank Review for 1946-48 calls attention to three factors concerning the development of the co-operative movement. (a) If co-operation is to play an important part in the economy of the country, adequate attention has to be paid to the training of the departmental staff, "specially in regard to the new aspects of the movement, such as consumers' co-operation, industrial co-operation, co-operative marketing and co-operative farming."[1] The necessity for training does not merely apply to the departmental staff, but to the executives and members of the Institutions themselves. (b) There is a lack of appreciation in most of the provinces and States of the importance of building up sound central financial agencies. (c) Whilst non-credit institutions like consumers' co-operation, co-operative milk supply, industrial co-operatives, have developed in the urban areas, the institutions in the rural areas continue to be mainly credit societies. The Review lays stress on the necessity for multi-purpose societies which should cater to the requirements of the cultivator such as seeds, manure, implements and even household utensils.

The Review for 1948-50 again stresses the vital need for organising multi-purpose societies in the rural areas. "The idea of effecting an economic regeneration of the Indian peasantry through co-operation has remained unfulfilled."[2] It also calls attention to the desirability of the taluka multi-purpose society remaining a purely trading concern and excluding banking from it. The primary multi-purpose societies would thus have to be affiliated to taluka multi-purpose societies for their trading activities and to central financing agencies for their credit needs.

Concluding Remarks

Judged from the point of view of an agency for supply of cheap credit, it has to be remembered that such cheap credit

1 P. 129.
2 P. 185.

does not cure the economic ailments of the agricultural classes. "The co-operative credit movement can flourish only if agriculture prospers." The improvement and prosperity of agriculture in India will depend on a variety of factors—consolidation of holdings, better seeds, improved methods of cultivation, more fertilisers, better rotation of crops, more irrigational facilities. The supply of credit will not by itself achieve these ends. The rural problem of India is the problem of raising the millions of the population to a moderate measure of material as well as social well-being. Co-operation in the larger sense—not in the sense of a cheap credit supplying agency—is a method of approach and a form of organisation. This method essentially consists not in having things done by others, but in learning to do things ourselves.

Amongst the various suggestions for extending the scope of usefulness of the co-operative societies may be included the proposal for the institution of multi-purpose societies. It is pointed out that the rural co-operative societies had in the past done little more than function as money-lending institutions and had rarely taken a deeper interest in the life of their members. The Reserve Bank of India in its bulletins drew attention to this weakness of the existing co-operative system, and recommended that credit societies should be converted into multi-purpose societies, not only supplying finance, but helping in the betterment of the life of the villagers, supplying pure seeds and improved implements, saving litigation expenses by measures of arbitration, effecting consolidation of holdings, promoting sanitation and providing medical relief—becoming in brief the centre of activities of the life of the village. In spite of the fact that the Agricultural Credit Department of the Reserve Bank of India advocated the institution of the multi-purpose society as the primary unit in villages, co-operative opinion in India does not seem as yet to have fully accepted the idea of a single society trying to meet all the needs of the cultivator. The cultivator has been regarded as a bundle of needs, each of which has to be met by a separate society.

One of the hopeful signs of our times, however, is the adoption of the idea of a multi-purpose society as a primary unit in villages. The Saraiya Committee on Co-operative Planning has also emphasized the need for the reorganisation of the primary credit societies into multi-purpose societies. This idea has gained ground mainly in Bombay, Madras, Utter Pradesh and Mysore.

There has been in our times a net work of co-operative organisations in Europe reaching deep down into the life of the rural population. In many of the European countries its first adoption has been followed by a remarkable economic and moral activity. A number of wrong ideas have occupied the field with regard to the character of the movement and the conditions to which it is subject. A report published in 1939 under the auspices of the International Labour Office gives us a comprehensive definition of the Co-operative Organisation. "A co-operative society is an association of the economically weak who, voluntarily associating on the basis of equal rights and equal responsibility, transfer to an undertaking one or several of their economic functions corresponding to one or several of the economic needs which are common to them all, but which each of them is unable fully to satisfy by his own individual efforts, and manage and use such undertakings in mutual collaboration to their common material and moral advantage."[1] This definition implies a level of education which is lacking in India. Democratic control is equally lacking. So also ability to conduct business and a federal structure of the larger units constituted freely from below. The purpose and the structure are bound together; and whereas in India the structure is so radically different from the purpose, not much can be reasonably expected of the co-operative movement.

But apart from the question of fulfilling its ideal we may ask: Has the co-operative movement succeeded in the limited task of supplying cheap credit to the agricultural population? The total working capital of the agricultural societies was roughly Rs. 30.5 crores in 1939-40, Rs. 33 crores in 1945-46, Rs. 35 crores in 1949-50, and Rs. 41 crores in 1950-51. Rs.8.1 crores were lent to the cultivators, perhaps half a per cent of the total agricultural indebtedness of India in 1939-40. In 1950-51, the loans advanced during the year amounted to Rs. 22.9 crores as against Rs. 18 crores in the previous year. In the post-war period, advances made by the agricultural credit societies show a great increase as compared with the pre-war years. But these loans are for short-term only. It may be pointed out also that the vast majority of the peasantry do not possess even the means required to become members of the co-operative societies. "At one end of the scale there are people who are so well off that they do not desire to incur the risk of unlimited liability by

1 "Co-operative Action in Rural Life," Geneva 1939, p. 5.

enlisting themselves as members. At the other end, there are persons who are so poor that they are refused membership. It is, therefore, not unfair to assume that the co-operative population represents the medium agricultural population."[1] So also the Agricultural Commission observe: "Except in the Punjab, Bombay and Madras, the movement in the major provinces has so far reached only a small part of the rural population."[2] So also Dr. Anstey: "Another difficulty is that credit societies are of no use in the poorest districts, where the cultivators are most in need of aid. It is worse than useless to give loans to cultivators who are permanently incapable—owing to fragmentation, climatic or other difficulties—of making their holdings pay. Thus it is chiefly in the most prosperous areas that credit societies are successful."[3] Even in the States where the movement is strong, it served only about 15% of the rural population in Bombay, 14.8% in Madras, and 9% in the Utter Pradesh in 1949.[4] Dr. Harold Mann, once Director of Agriculture in Bombay, observed in 1941: "On the whole the outlook for the co-operative movement as hitherto organised....makes me rather doubtful as to whether a very different attitude is not required to the movement by the authorities than has been the case in the past."[5]

The inadequacy of the resources at the disposal of Agricultural Credit Societies has been a constant theme of complaint on the part of enthusiasts for the movement. The agricultural credit needs of the country have been variously estimated from Rs. 100 crores to Rs. 200 crores. It has been said that the Reserve Bank which is the custodian of the short term banking resources of the country cannot divert these resources to finance an industry which is not only unorganised, but open to all kinds of risks, including the vagaries of weather. But even these resources if diverted cannot provide all the credit needed. A substantial portion of rural savings obtained by Government through Post Office Savings Banks and Treasury Bonds are diverted to other purposes than the primary purpose of financing agriculture. Whilst an Industrial Finance Corporation has been organised for financing big industries, a National Government, professing genuine concern in the welfare of the masses, has

1 Bengal Provincial Banking Enquiry Committee Report, p. 69.

2 Report, p. 447.

3 Dr. Vera Anstey, "Economic Development of India," p. 202.

4 Thirumalai, op. cit., p. 194.

5 Dr. Harold Mann in a letter to the Editor, *Indian Co-operative Review*, October-December, 1941, p. 501.

not even theoretically endorsed the idea of a National Agricultural Finance Corporation, utilising the savings of the rural population, for the development of its main industry. The Gadgil Committee adumbrated the idea. The Congress Agrarian Reforms Committee brushed aside the proposal on the ground that it would be a new institution, and that if credit facilities were to be organised, they could best be organised through the Land Mortgage Banks and the primary societies which have been in contact with the rural population for a period of forty years. What is forgotten is that the rules under which the rural societies work make it possible for them to reach only the substantial farmer with reasonable guarantees for repayment by instalments.

When we consider the place of the co-operative movement in the economic life of India and the factors that can account for its slow growth, we have to remember, in the first place, that it was originally intended to meet the evils of usury and indebtedness, and, therefore, confined to the supply of cheap credit. Whatever criticisms we may have to offer about this aspect of the movement do not necessarily apply to the non-credit societies many of which have been started during recent years in parts of the country. Societies for the marketing of cotton and gur in Bombay, consolidation of holdings in the Punjab, sugar cane supply in Uttar Pradesh and Bihar and irrigation in Bengal have been working with success, and can stand comparison with similar institutions in other parts of the world.

Secondly, if as credit institutions the co-operative movement has not met with the success that was anticipated from it by its sponsors, one reason may be found in the fact that it was sponsored from the top by a Government that could not evoke the ready response and services of the young and the ardent, who looked with suspicion upon every movement so started. "Government are so out of touch with public feeling and sentiment that despite their control of the machinery of administration they fail in their efforts to seek an expansion of the movement."[1]

In the next place, whilst Government interference is not lacking, Government assistance on the scale on which it is needed to ensure the success of the movement is largely lacking. The cost of administration and of a paid agency for propaganda and

1 V. L. Mehta, "Is Co-operation Suited to Rural India?" in *Indian Journal of Social Work*, December, 1942.

guidance has made it difficult to reduce the rates of interest on loans. Supervision and control from above have made the system of finance rigid and inelastic.

Writing about the co-operative movement Sir John Russell observed: "The outstanding instance of success in co-operation is Denmark, a land of small farmers; and it has given them a standard of living that is the envy of the civilised world. Four essential conditions of success are all present in Denmark: (1) The village population is homogeneous; there is nothing corresponding with caste distinctions. (2) The cultivators are all literate. (3) From the outset People's High Schools were set up where the cultivators were taught better living both in the home and the village, and where ideas of corporate responsibility in village and national life were inculcated. (4) The Co-operative Societies are mostly trading societies, taking over the produce from the cultivator, working it up into marketable form and selling it for him. Also they supply him with all materials for use in the home and on the farm. They are mainly financed by the local banks, and the members are jointly and severally liable for the loan. As depositors the members provide a substantial part of the funds; it is their own money that is lent to members, and in consequence each borrower feels himself under the necessity of repayment."[1]

Unfortunately none of these conditions obtain in India and those who look to the co-operative movement as the one solvent of our agrarian difficulties might well take into account the absence of those conditions that have made the movement so successful in Denmark.

CHAPTER XIV

ORGANISED AGRICULTURAL CREDIT (Continued)

Other Forms of Co-operation: Non-Credit Societies

Equally vital in rural economy is the place of co-operative marketing societies.[2] Societies for the supply of sugar cane to sugar factories in Bihar and the U.P. constitute a class by themselves. The cotton sales societies in Gujarat pool the produce and distribute average prices. Societies for the consolidation of holdings in the Punjab have during the last twenty years led to the consolidation of over a million acres of land.

1 Sir John Russell's Report, p. 63.
2 We discuss the question of marketing in another section.

There were irrigation societies in pre-partitioned Bengal numbering over a thousand, that undertook minor irrigation works on behalf of their members. Besides these, there are different societies like ghee production and sale societies in the U.P. (630), anti-malaria societies in Bengal (1099), loan and sales societies in Madras (149), and milk supplying societies in West Bengal (153), etc.

Agricultural Sales Societies

Marketing of agricultural produce can be most effectively helped by co-operative institutions. The individual is illiterate —a co-operative society may earn for him the benefits of knowledge of market conditions. It is well known that due to defective transport the cultivator cannot sell his produce and obtain a better price in any market except in the village to which he belongs. His indebtedness and poverty compel him to obtain advances against his growing crops, at rates varying from 20 to 50 per cent. The lender often stipulates that the crops should be sold to the lender at a pre-arranged price, which is invariably lower than the market price. The creditor, apart from his advances against the crops, presses for payment immediately after the harvest, knowing that if the debtor does not pay after selling his produce, he will have to wait for another harvest. He has to sell his produce as quickly as possible, and as most of them sell at the same time, the glut occasions depression in prices. The village money-lenders are often financed by bigger agents to whom they have to pay interest; they offer as low prices to cultivators as possible. Very often mercantile firms in the big towns employ their own agents who advance loans to cultivators.

Under these conditions one can easily realise the need for co-operative marketing societies which can arrange for the collection and sale of members' produce. The working of these co-operative sales societies is somewhat complex and finance for marketing on a large scale is difficult to obtain. There is, moreover, a lack of knowledge of technique on the part of co-operative officials, and the absence of godown and storage facilities prevents the rapid multiplication of sales societies. It has been said that credit alone will not solve the problem of marketing, and that we may hope for better results in developing this type of sale societies with ample credit facilities. The cotton sales societies in Bombay have benefited the growers. The sales

societies of Surat have recently combined in a federation taking over a co-operative ginning factory started by the members. Bengal has several jute sales societies with a jute wholesale society at Calcutta.

Progress has been achieved by marketing societies in a number of States. In Bombay the number increased from 197 in 1945-46 to 224 in 1947-48. The Bombay State Co-operative Bank encourages the establishment of marketing societies, and has itself organised several sales societies. In Madras, in 1948 there were 192 sale societies with five marketing federations. The societies issued loans and advances of Rs. 188 lakhs, and marketed produce of the value of Rs. 152 lakhs.[1] The absence of adequate storage facilities has been repeatedly commented upon in the marketing problem.

The following table shows the progress achieved by marketing societies:[2]

				In Rupees in lakhs	
		Membership		Loans	Value of goods
Year	Numbers	Individuals	Societies	Issued	sold
1947-48	6746	12,19,173	7216	306.44	1510.72
1948-49	7618	13,38,507	8013	439.52	3037.25
1949-50	6907	13,20,418	7521	539.56	2507.64

Finance is obtained from the central financing agencies. A number of States have enacted legislation for licensed warehouses. In Madras, Government sanctioned a scheme, granting subsidies to the extent of 50 per cent of the cost of construction of godowns built by co-operative sales societies. The scheme was put into operation during 1949-50. Similarly, in Bombay, co-operative societies putting up godowns for marketing or storage of agricultural produce are assisted through loans at 3½ per cent or subsidies to the extent of 25 to 50 per cent of the cost.

Summing up the situation the Reserve Bank Review states: "Co-operative marketing in the strict sense of the term has not made any appreciable progress in India so far. The statistical details .... are apt to be misleading, as a large portion of the business of these institutions has been in the nature of distribution of essential articles such as food grains, cloth and other necessaries of life."[3]

1 Rangnekar, op. cit., pp. 149 et seq.

2 Review of the Co-operative Movement 1948-50, op. cit. p. 83.

3 *Ibid.*, p. 103. For a further discussion of marketing problems see later sections in this chapter.

Land Mortgage Banks

The need for a separate agency for the supply of long-term loans for the liquidation of past debts and the improvement of land led to the establishment of Land Mortgage Banks. These are financed by the Central Land Mortgage Banks in some provinces, and by the Provincial Co-operative Banks in others. The first such bank was established in Madras in 1929, under the name of the Central Land Mortgage Bank. It co-ordinated the working of primary banks in the province which increased from 12 to 120 in 1942-43. Upto the 30th June, 1940, the Bank had floated debentures guaranteed by Government for principal and interest to the extent of Rs. 2 .64 crores. There were no arrears in respect of the loans of the Bank which amounted to nearly Rs. 2 crores. This satisfactory position was due to a variety of causes—care in examining titles of lands taken as security, adjusting the period of loans to that of debentures, and fixing the instalments for repayment according to the capacity of the borrowers. Amongst other factors, that contributed to the success of Land Mortgage Banks in Madras, may be included the active assistance given by Government, special powers for recovery of defaulted instalments, and the absence of restriction on the alienability of land.

Bengal had five land mortgage banks by the end of 1940. In other provinces there are a few inadequately developed institutions, whilst in Bombay a Central Land Mortgage Bank was established in 1935. At the end of 1942-43 there were 27 Land Mortgage Banks in India with a working capital of Rs. 7.7 crores. It has been pointed out that a debtor in Madras cannot borrow from a land mortgage bank more than half the value of his property. Only ten per cent of the applicants were found to have sufficient security to offer. The Reserve Bank Review on Co-operation (1941) pointed out that the banks were too much concerned with the redemption of old debts, and too little with the improvement of agriculture. It likewise pleaded for closer co-ordination between the land mortgage banks and the debt conciliation boards set up in many of the provinces and also with the other co-operative organisations. The Agricultural Finance sub-committee observe that the development of Land Mortgage Banks is very small compared with the requirements of long-term finance of the country, and recommend that an Agricultural Credit Corporation should be established for the purpose. The Land Mortgage Banks might be used to finance land improve-

ment in schemes of post-war reconstruction.[1] The following table indicates the growth of these banks during the two years 1948-50:—[2]

Central Land Mortgage Banks

Year	Number	Membership	Deposits and borrowings	Working Capital	Fresh Advances
			In Lakhs of Rupees		
1948-49	5	8,127	19.55	597.35	103.40
1949-50	5	8,871	49.50	686.94	101.8
1950-51	5	9,848	—	772.06	132.9

Barring Madras, and to some extent Bombay and Coorg, land mortgage banks have not made much progress. In 1950-51. there were 286 land mortgage banks, of which 129 were in Madras State. The total sum advanced was 729 lakhs of rupees.

The working of land mortgage banks shows that they have not been able to come to the help of the small holders who constitute a majority of agriculturists. Despite the use of debentures to increase their resources, which are mostly taken up by banks, insurance companies and other institutional investors, their resources are not adequate. Their working is not adapted to the long term needs of the cultivators. The Planning Commission have indicated two factors that they consider responsible for their slow progress—lack of trained personnel and the legal inability of the borrower to offer land as security.[3] The land mortgage banks, as they function today, cannot meet the long term requirements of the agriculturists.

Future Prospects

The survey of Co-operative Action in Rural Life in Europe prepared by the International Labour Office, 1939, observes: "These (co-operative) organisations are characterised above all by spontaneity; they are clearly the direct expression of the needs from which they issue, and are exactly adapted to those needs. Everywhere their roots lie deep down in the people's traditional way of life, and reach far back into the old communal institutions, of which in modern economy they are the rejuvenated form. They have grown in size and multiplied in number solely or mainly by the direct efforts of their members, and have neither in every case nor at every time had the benefit of legislation suited to their original character."[4] It is this spontaneity in the move-

1 Report, p. 53.

2 Reserve Bank Review, op. cit., pp. 214-15. Figures for 1950-51 are taken from India, 1954, op. cit.

3 First Five Year Plan, pp. 239-40.

4 P. 41.

ment that is lacking in India and compels us to observe that only State action backed by the resources of the Reserve Bank can best utilise such existing institutions as have their roots in the village life of the past.

If we have been critical about the working and achievements of the co-operative movement as a credit supply movement initiated by a Government suffering from the weaknesses of red tape administration, such criticisms must not be interpreted as hostility to the movement itself. Even as a credit supply movement it has potentialities of immense good, if with the backing of the resources of the Government, it offers cheap credit for current needs of the cultivator. But there are other aspects of the co-operative movement which have even a larger bearing on agricultural prosperity than the supply of credit—the development of marketing the supply of improved seeds, bunding and anti-erosion schemes, increase of well irrigation, land reclamation schemes, consolidation of holdings and the revival of cottage industries. "The task of the co-operative movement is nothing less than the application of co-operation to the general, and particularly the economic, regeneration of the rural population."[1] Only when this re-orientation occurs, the co-operative movement will become a national movement for agricultural reconstruction.

Even in Western countries, it has been pointed out, the small holder, left to himself, is ill-informed about prices, rates of transport and the state of the real demand in centres of consumption. "The problem (of marketing) is by its very nature insoluble for isolated small producers.... Co-operative organisation gives the small holder all the advantages which capital places at the disposal of the large land owners."[2] In India the cultivator suffers from all these disadvantages—and co-operative marketing in the form of sales societies cannot solve these difficulties, unless the State comes to the help of these societies. The urgent and immediate need is the need for eliminating the middlemen. If these middlemen are to be eliminated we need an organisation which can collect the farm produce, arrange for weighing, standardising and storing, advance cash to the cultivators to enable them to meet their liabilities and their next cropping cost, and market the produce, obtaining for the cultivators the best available price. Such an organisation, whether it is a sales society, or any other form of co-operative organisation, in a country like India pre-supposes

1 Reserve Bank Review of the Co-operative Movement, 1941, p. 81. See also V. L. Mehta. "Is Co-operation Suited to India?" op. cit.

2 "Co-operative Action in Rural Life," p. 18.

and requires for its successful working an elaborate credit structure provided with funds by the Reserve Bank of India. The Reserve Bank already possesses the statutory powers for providing rural credit to credit institutions and Provincial Co-operative Banks. It has hitherto refrained from using its resources in this direction; it has even regarded with a questioning attitude the supply of credit which would enable the cultivator to hold on to his crop instead of parting with it under unfavourable conditions.

Recently the Reserve Bank of India Act has been amended to enable it to liberalise the terms of credit extended to the co-operative movement. It is authorised to give financial accommodation to co-operative institutions in the following forms: (a) loans and advances against Government securities payable on demand or on expiry of a fixed period not to exceed 90 days, subject to limits and margins stipulated by the Reserve Bank; (b) loans and advances to Provincial Co-operative Banks against bills of exchange and promissory notes of Central Co-operative Banks or marketing societies endorsed by the Provincial Co-operative Banks and drawn to finance seasonal agricultural or marketing operations, or to rediscount such bills of exchange or promissory notes; (c) loans and advances on promissory notes of Provincial or Co-operative Banks supported by documents of title to goods which have been transferred, assigned or pledged as security for a cash credit or overdraft granted by the Provincial Co-operative Bank to a central bank or marketing society for bonafide commercial transactions or to finance seasonal agricultural or marketing operations. Most of these loans are extended at a rate of interest 1½ per cent lower than the bank rate., The facilities thus offered are being increasingly used by co-operative institutions in recent years as can be seen from the following table:—

Year	Loans and advances to Provincial Co-operative Banks (in lakhs of Rupees)
1945-46	1.2
1946-47	1.5
1947-48	16.8
1948-49	1,02.6
1949-50	3,70.7
1950-51	5,37.8
1951-52	12,51.3

Due to absence of licensed warehouses, co-operative institutions have not availed themselves of the accommodation offered under c.

Under a planned economy, with a Central Bank controlled

in the wider national interests, it has been said, we can visualise brighter prospects for our agriculture. We can fix minimum prices for our agricultural commodities, standardise qualities and systematically develop credit institutions, connecting the cultivator and his rural markets with the central markets. In a country predominantly agricultural like Canada, Central Banking institutions have taken the initiative and provided all the credit that the farmers need for raising and marketing the crops. In a country like India with banking institutions still in infancy, with the mass of the rural population unfamiliar with banking, it is all the more imperative that the Reserve Bank already possessed of the necessary powers, should take the initiative and by applying national funds to a national purpose revitalise our declining agriculture.

In brief, it is desirable that the co-operative societies should not only take on the work of storage and sale of the crops, but should transform themselves into multi-purpose societies with limited liability, if unlimited liability fails to attract support. Such societies might not only help the cultivators in marketing crops, but might contribute to the uplift of the villagers by organising education, sanitation, the improvement of village roads, and even undertaking the urgently needed task of social reforms by way of education. All this work implies planning. But, as Prof. Mukerjee observes, "Planned co-operation must be an offensive on all fronts. Weakness or indefensibility in one sector will establish the foe in no time within the entire territory. The peasant's life with its inefficiency, simplicity, fear and ignorance is one undivided whole, and that rural programme succeeds which can improve him from all sides, economically, socially and morally."[1]

Agricultural Marketing

The trade statistics of India so far as they refer to internal trade are very unsatisfactory and give us no definite view of the extent of the trade. In the early days the cultivator grew his own food; and whatever surplus he produced was sold in the market at harvest time for purchasing other necessaries of life. Indian agricultural economy has now been changed to a considerable extent, and with the introduction of roads and railways and the substitution of cash nexus for the old customary basis of economic relationships, commercialisation and

1 "Planned Co-operation" in *Indian Co-operative Review*, 1941, p. 18.

production of agricultural crops for the market have replaced the old organisation. In view of the fact that India itself is the main market for her agricultural produce, the marketing problem acquires an importance of its own. The value of the total agricultural produce of British India was estimated by the Banking Enquiry Committee at roughly between Rs. 1,200 and Rs. 1,300 crores in 1929. Out of this, the value of the produce exported outside India was estimated at Rs. 200 crores. Dr. Rao estimated the total gross value of agricultural production for the year 1931-32 at Rs. 7836 millions and net value after deducting wastage, depreciation, etc., at Rs. 5,927 millions.[1]

Conditions and Methods of Marketing

In spite of the fact that the Indian cultivator has to depend almost entirely on the internal market, there is no "orderly marketing" in India and the producer markets his produce under disadvantageous conditions. At present (1) there is the practice of holding a local or weekly market in which large quantities of agricultural product are bought and sold. (2) The local money-lender frequently purchases the produce from the cultivator to sell it in a wider market. (3) Itinerant buyers go round the villages on their own account or on behalf of employers, collecting the produce for a distant market. The absence of knowledge of market conditions and of price fluctuations in such markets, due to the illiteracy of the agriculturists, places them at the mercy of the money lenders and the middlemen.

The broad feature that marks agricultural marketing conditions in India is the excessive number of middlemen who intervene between the cultivator and the final disposer of the crop. In many parts of the Punjab and the U.P., nomadic or itinerant middlemen known as banjaras collect grains in the village. They traverse the country carrying the grains over great distances. They advance paddy seeds at sowing time, going from village to village, and receive payments in paddy often amounting to four or five times the amount of the advance. There are also the gariwallas or cartmen as well as banias with their ponies or buffaloes going about in the villages at the harvest season. The well-to-do cultivators may keep their own carts and send their produce to the periodical market or mandi. But the majority have to deal with banias, sahukars and others. For crops like linseed, mustard, wheat and sugarcane, the cultivator has to deal with the itinerant dealer, who

1 V. K. R. V. Rao, op. cit. p. 81

in turn is linked up with the arhatiya, who sells the commodity in the mandi. Similarly, the agents of large exporting firms go about the villages collecting wheat, cotton, groundnuts from the rural areas. The difference between the price received by the cultivator and central market prices is roughly estimated at about 15 to 20 per cent. The difference includes the gains of the middlemen as well as transport and freight charges.[1] In an agricultural economy like that of India even a 15 per cent profit by the middlemen may involve an encroachment on the cultivator's subsistence income which he cannot afford except by semi-starvation. Particularly after the depression of 1929, whilst prices of agricultural produce have gone down the profits of the middlemen have grown, though figures of such growth are not available.[2] Moreover, charges such as cost of transportation, storing, banking and insurance are stated to be the highest in the world.

The Royal Commission on Agriculture observed in this connection: "From all provinces we received complaints of the disabilities under which the cultivator labours in selling his produce in markets as at present organised. It was stated that scales, weights and measures were manipulated against him, a practice which is often rendered easier by the absence of standardised weights and measures and of any system of regular inspection. Deductions against which he has no means of protest are made in most markets for religious and charitable purposes and for other objects. Large samples of the produce are taken for which he is not paid even when no sale is effected. Bargains between the agent who acts for him and the one who negotiates for the purchaser are made secretly under a cloth, and he remains in ignorance of what is happening. The broker is more inclined to favour the purchaser than the seller whom he only sees very occasionally."[3] The Banking Enquiry Committee added another disability that even after prices were settled, at the time of weighment the price was still further cut down by refusal to take delivery on the ground that the quality was inferior.

The conditions of marketing, moreover, differ from State to State. While the better type of cultivators keep their

1 "Agricultural Marketing" in "Economic Problems of Modern India," Vol. I, 1939, pp. 294 *et seq.*

2 S. C. Majumdar, "Rural Marketing in India," in "*Rural India*," April, 1940, pp. 233 *et seq.*

3 Report, pp. 388-9.

full supply of requirements for the year and sell only the actual surplus, the majority who are already burdened with a debt are compelled to sell a large portion of the total crop and borrow back some of it later in the year. In the case of grain loans the crop in its entirety is often handed over to the money-lender. Mr. Keatinge observes in connection with the Deccan: "In case of jowar and bajri most of the surplus produce comes into the market immediately after the harvest and in the case of cotton, wheat and oil seeds practically the whole crop is marketed at once."[1] In a large number of cases, the money-lender becomes the owner of the crops even before it is harvested. Where the crops are cash crops entering into the international market, brokers make advances to the cultivators on standing crops. In other cases, agents of commercial firms go from village to village for purchasing the crops on the spot. Gilbert Slater in his study of South Indian Villages quotes cases where cotton is sold by the ryots to the agents of ginning companies or to merchants who visit the villages.

The Banking Enquiry Committee mention reports from almost all parts of India where the advances to the cultivators not only carry high rates of interest, but put the borrowers under an obligation to sell their produce for less than the anticipated market prices. Thus in some parts of Bengal, the advances carry interest from 24 to 75 per cent, and the rate at which the grower binds himself to sell is often lower by 10 to 25 per cent than the anticipated market prices. In Bihar and Orissa, a system of advances carrying a liability to sell the produce through the lender is reported among cotton and sugarcane growers and ghee dealers in the United Provinces; and the producers obtain for their produce less than what they would have got if they had been free to market the produce themselves.

Another point brought out in the Provincial Banking Committee Reports relates to the effects of the cultivators' indebtedness on the marketing of his produce, even if the cultivator does not borrow specifically for raising the crop. The Bengal Committee report that the cultivator who is indebted is always pressed heavily by the creditor immediately after harvest. The effect of this pressure is so great that the borrower is compelled to sell his produce as quickly as he can. If all sell at the same time the price naturally comes down by competition.

Thirdly, the Bombay Banking Enquiry Committee observe

1 Op. cit., 158 *et seq.*

that a small percentage of the cultivators sell their standing crops of cotton, either for want of money or for speculation. The mango crop in Bombay is almost invariably sold when it is on the trees, and sometimes even before it is actually seen in blossom.

Recommendations of the Agricultural Commission

The Royal Commission on Agriculture recommended—and the Provincial and the Central Banking Enquiry Committees endorsed the recommendations—the following measures for improving and organising agricultural marketings:—

(1) Improvement of transport facilities including rural communication. (2) Lowering of railway freight rates and grant of other railway facilities. (3) Establishment of regulated markets under Provincial Legislation on the lines of the Berar and Hyderabad Market Acts. (4) Standardisation of weights and measures. (5) Adoption of measures to secure improved quality of produce by organisation amongst buyers and traders, and to guard against adulteration. (6) Fixation of standards and grades of commodities. (7) Promotion of co-operative sale societies and other suitable organisations for purposes of sale. (8) Holding of auction sales by Agricultural Departments to ensure increased price to the cultivators who produce improved varieties. (9) Carrying out of market surveys. (10) Appointment of expert marketing officers on the staff of the Agricultural Department, able to understand the language of the market.

As regards the proposal for the standardisation of weights and measures, decades have passed since the Royal Commission on Agriculture drew attention to its importance. The Government of India in 1939 passed an Act for standardisation, but the Act is more or less a dead letter, due mainly to the reluctance on the part of the State Governments to implement it. The Congress Agrarian Reforms Committee observe, on a note of regret, "Today, in the absence of standardised weights and measures, the illiterate peasantry, hardly equipped for even the simplest calculations, are exploited ruthlessly by the dealers."[1]

The Banking Enquiry Committee further recommended that Provincial Governments should consider the desirability of advancing long term loans at concessional rates to co-operative

1 Report, pp. 109-10.

societies to build godowns in market centres. They stressed the importance of providing warehouses by private agencies, and the need for a detailed investigation of the problem of starting railway warehouses in the chief centres of trade. They advised the placing of railway receipts by the legislature on the same footing as bills of lading.

As regards the conditions of external marketing Dr. Clouston, who was deputed by the Imperial Council of Agricultural Research to the British Industrial Fair in 1930, reported that "the reputation of Indian agricultural products in the world's markets is low. The price paid by consumers in Europe for these products is based very largely on the reputation and this reacts unfavourably upon the price received by these cultivators who have improved the quality of their produce."[1] Dr. Clouston pointed out that some of the firms of Europe believe that India cannot produce high grade wheat and other products; he gave facts to disprove this notion, and pleaded for better organisation. The producer in India "has little incentive to market his produce in the best possible condition, unless that condition is recognised in the price he gets for it."[2] The foreign banking experts to the Banking Enquiry Committee pointed out that if steps were not taken to organise India's exports in such a way as to meet the modern requirements of world trade, there would be an inevitable reaction on the internal market to the great detriment of the cultivator. The chaotic conditions of the markets in India described by the Royal Commission did not seem to have changed for the better twelve years later, when the National Planning Committee observed: "On the whole, however, the picture drawn at that time faithfully reflects the state of affairs in Indian markets even today."[3]

Measures for Marketing: (a) Transport Facilities

One of the important factors that make for effective marketing in the interests of the cultivators is transport. India has about 34,000 miles of Railway, 182,000 miles of motorable roads and 159,000 miles of non-metalled roads, giving an average of 22 miles per 100 square miles of territory, as compared with 95 miles in Germany. Excluding urban roads, there are about 118,000 miles of all-weather roads in the country. India's road system is insufficient for her needs, there being only 9.7 miles

1 Quoted in Central Banking Enquiry Committee Report, Vol. I p. 208
2 Report of the Royal Commission on Agriculture, p. 398.
3 "Rural Marketing and Finance," 1947, p. 40.

of all-weather roads for every 100 square miles of the territory. The existing roads are (a) national, (b) provincial, (c) district and (d) village roads. National roads are under the charge of the Pubic Works Department. Village roads are the concern of the villagers, with the result that they are neglected. Most of them are tracks which become unusable during the rains. The Royal Commission on Agriculture recommended liberal grants by the Local Governments for the construction and improvement of village roads. In 1940, the Standing Committee for Roads approved a grant of ten lakhs of rupees to Provincial Governments for road improvement. The construction and development of feeder roads have hitherto been starved, as the Road Fund created since 1937 was used for development of inter-provincial and inter-district roads. The Government of India have now laid down that 25 per cent of the Provincial shares in the Road Fund should be used on feeder roads. What is most urgently needed in the interests of the cultivators is not only an intensive construction of roads, but the co-ordination of railway services with motor transport, and increasing facilities for the transport of perishable products such as milk, fruits and vegetables. The Five Year Plan has made a provision of Rs. 100 crores for the development of roads. The development of about 3,000 miles of new roads and 16,000 to 17,000 miles of village roads through community effort is envisaged in the Plan.

(b) Marketing Organisation

The Government of India after consultation with Provincial Governments created the office of the Agricultural Marketing Advisor (now the Director of Marketing and Inspection) in 1935. With the help of subsidies from the Indian Committee of Agricultural Research, some of the State Governments have established similar organisations, which have been now set up on a permanent basis in Bombay, Madras, West Bengal, Bihar, the Pujab, Hyderabad and Mysore.

This organisation was given the task of (1) carrying out marketing surveys and publishing reports describing the present system of marketing of some of the more important agricultural products with recommendations on the lines of improvement and (2) drawing up suitable grade specifications after examining the characteristics of market samples.

In 1937, a report on the Cold Storage and Transport of Perishable Produce in Delhi was issued, followed by all-India market-

ing survey reports on wheat, linseed, eggs, tobacco, coffee, grapes, milk and rice. A handbook on the quality of Indian wool, intended to serve as a guide to wool merchants, has also been prepared. Survey work is in progress in respect of a certain number of commodities. In all, 60 marketing reports on different commodities have been published so far.

Co-operative marketing societies have of late taken root in the country. The majority of the societies deal in single commodities. They advise loans to members on the security of produce or arrange for the collection and sale of members' produce.

The lack of storage facilities is a great handicap in securing marketing finance. The absence of warehouse receipts which could serve as collaterals for promissory notes prevents the Reserve Bank from extending help for financing marketing operations. The need to promote warehousing has been time and again stressed by various Committees and the Reserve Bank; and yet, despite the passing of Warehousing Acts in some States, no progress has been so far made to set up licensed warehouses. The States seem apathetic, as the Acts, which are enabling pieces of legislation, leave the work of setting up warehouses to private enterprise.

(c) Grading of Commodities

With a view to securing improved quality from the producer, the physical grading and packing of commodities like fruits, eggs, etc. were undertaken. The Agricultural Produce (Grading and Marketing) Act, 1937, defined standards of quality and methods of marketing in respect of prescribed grade designations applied to scheduled products. The schedule now includes fruits, vegetables, eggs, dairy produce, tobacco, coffee, *atta*, vegetable oils, oil seeds, cotton, rice, wheat, sugarcane, gur, lac, hides and skins, wool, wood, areca-nuts and some other commodities. The *Agmark* is applied to the commodities thus graded. During 1943 alone, more than 549 lakhs of rupees worth of produce was sold under the *Agmark* as compared with 102 lakhs in 1940. The value of the produce graded has risen to Rs. 18 crores in 1952. The Planning Commission have accepted the principle of compulsory grading of agricultural produce for export, and have recommended a scheme of grading to be introduced in stages over a period of five years beginning from 1951-52, with a cost of Rs. 87 lakhs. The Commission estimate an

increase of 10 per cent in the value of exports as a result of grading.[1] Will these benefits accrue to the semi-starved farmers? Or will they be swallowed up by our patriotic exporters and middlemen?

(d) Regulated Markets

In order to help the agriculturists against abuses in the mandi some States have established regulated markets, where unauthorised deductions are prohibited and brokerage and weights regulated. The system of open auction or sales has been introduced in some places. Though the growers are represented in the committees in whom the management of regulated markets is vested, their voice is seldom effective. The funds have not been utilised by these marketing committees for improvement and development of marketing facilities. The Madhya Pradesh Government have entrusted the cotton market at Amravati to the local marketing co-operative. These measures are said to have benefited the cultivator to some extent. Despite the adoption of the Agricultural Produce Markets Act, there are still a large number of unregulated markets in some of the States. The Planning Commission recommend the extension of the Act to cover all the important markets in each State by 1955-56 as the first step in improving marketing facilities.

Rural Reconstruction and Organisation of the Village Community

In the West as co-operative action developed, it was directed outside the strictly economic interests of the peasant's household to tasks concerning his health and general welfare. It was even directed to the village community as a whole supplying to it the equipment and organisation in which it was usually lacking. Thus in France, co-operative societies were instrumental in improving rural housing, by equipping existing farm buildings or by building more spacious and healthy houses. In Hungary, the National Co-operative Society for Rural Housing with Government help made possible the reconstruction of 38.000 small houses in 7½ years.[2] In France, a decree of June, 1938, enabled the National Agricultural Credit Fund and the Regional Funds to make loans to local authorities for laying on drinking water and the construction of roads. There are electricity and water supply co-operative societies also. In Yugoslavia, health co-operative societies built fountains, provided dung pits, improved village streets, arranged for a doctor and a small hospital in each rural

1 First Five Year Plan, p. 248.
2 "Co-operative Action in Rural Life." Geneva, 1939. p. 28.

community concerned. In Denmark, 1,077 societies with a membership of over 194,000 maintained sanatoria.

Rural reconstruction on similar lines has of late years claimed some amount of attention in India. But what has been done so far has been done by individual efforts—the efforts of men and women fired by the impulse of social service and using their gifts to contribute to the welfare of the village folk. Such work was organised at Gurgaon, in the Punjab, covering education, sanitation, medical relief, improvement of agriculture and maternity welfare. The Punjab Government subsequently appointed Col. Brayne, who was working at Gurgaon, Commissioner for Rural Reconstruction: and Bengal followed by making a similar appointment.

The total number of non-agricultural societies rose to 37,000 in 1949-50, with a membership of 35,00,000 from 17,442 societies with a membership of 1,908,000 in 1940-41. The working capital increased from Rs. 28,53 lakhs in 1940-41 to Rs. 59,15 lakhs in 1949-50. Some of these societies have been specifically organised for social welfare such as Education Societies, Health Societies Veterinary Societies, Better Living Societies, etc., mostly in the Utter Pradesh and the Punjab. There were about 5,142 Social Service Societies operating in rural areas in 1950-51.

Recent Developments

A number of experiments on intensive rural development have been carried out since 1946 at Sevagram in Madhya Pradesh, at the various Sarvodaya centres in Bombay, under the Fikra Development Plan in Madras and at the pilot projects at Etawah and Gorakhpur in Uttar Pradesh. Encouraged by the results achieved by these experiments, the Planning Commission have prepared a scheme of community development programme as an integral part of the Five Year Plan. It has made a provision of Rs. 90 crores for setting up a number of community projects modelled on the Extension Services in agriculture in the U.S.A. The integrated plan of Community Projects sponsored by the Centre in 1952 for the reorganisation of the socio-economic life of the village envisages the establishment of a network of extension services throughout the country during the next ten years. Their services are to carry modern methods of agriculture to the farmer's doorstep besides reorienting his outlook in other spheres.[1]

1 For details see Chapter XV First Five Year Plan.

The Future

When discussing the problem of rural reconstruction let us not forget the substantial work achieved by Gandhiji during the last few years. The whole problem of economic regeneration of India for Gandhiji centred round the village as the economic unit. Gandhiji started from the conviction that the country was not prepared for a revolutionary change in its economic organisation, and that reform along capitalist lines looking to the alien Government for active assistance would be equally futile. He, therefore, set out a programme for village uplift of which the main items were the revival of hand spinning and hand weaving combined with that of other village industries, a new type of education suited to the agricultural population, the uplift of women, better sanitation and the removal of untouchability and the drink habit. This programme was to be carried out through voluntary effort, backed by voluntary sacrifice on the part of the consuming public, through an education that would make the producer look upon his work as an opportunity for service, and not as a means of making private gains. The village worker would be at the same time "the scavenger, the nurse, the arbitrator of disputes and the teacher of the children of the village." "The whole of this programme will, however, be a structure on sand if it is not built on the solid foundation of economic equality. Economic equality must never be supposed to mean possesssion of an equal amount of worldly goods by every one. It does mean, however, that every one will have a proper house to live in, sufficient and balanced food to eat, and sufficient khadi with which to cover himself." The All-India Village Industries' Association was formed in 1934, in accordance with the resolution of the Indian National Congress, with a programme of improving village sanitation, diet and village industries. The work of the Association was helped and financed by the Provincial Congress Ministries, and was supplemented by the activities of the All-India Spinners' Association and the Gandhi Seva Sangh.

The co-operative movement in the West has evolved into a movement for rural reconstruction. It has tended to exert an influence over the general life of the village. "By means of meetings, festivals, games, the wireless, the cinema, the establishment of libraries, etc., the local co-operative societies and their federations do all they can to provide the countrymen with opportunities for relaxation, culture and communal life."[1]

1 "Co-operative Action in Rural Life,," Geneva 1939, p. 29.

In India, we have the foundations for the growth of a similar movement through the old village panchayats. We have the prospect of making it a spontaneous movement starting from the bottom, namely, the village unit, helped by the influence and work of Gandhiji and his followers. With the advent of National Government, we may have the right kind of collaboration between the Government and the co-operative movement making possible through legislation and financial resources the uplift of the rural population and the revival of our agricultural prosperity. The Five Year Plan visualises a socio-economic organisation in which co-operation is to be an essential feature. "As an instrument of democratic planning, combining initiative, mutual benefit and social purpose, co-operation must be an essential feature of the programme for the implementation of the Five Year Plan." If this hope is to be realised, the enthusiasm of the masses needs to be aroused, and an intensified programme of education has to be carried through within the briefest possible period of time. More than three years have passed since the Five Year Plan was initiated—but education seems to be subordinated to the achievement of other objectives and popular enthusiasm shows no evidence of being aroused. Where enthusiasm is aroused, official delay, bureaucratic red tape and aloofness work as a counteracting factors; exhibitionism takes the place of earnestness and the spirit of service; energies get wasted in regional rivalries and animosities. The detached observer may well ask: are we even one step nearer the fulfilment of the modest and unambitious hopes of those who planned and are now working out the plan?

CHAPTER XV

LAND TENURES AND LAND REVENUE

Early History

In a predominantly agricultural country like India, the problem of land tenures and land revenue are of primary importance in a discussion of economic problems. India with her variety of resources and geographical conditions presents a variety of land tenures, which have been complicated by historical causes.

In the Hindu period, the land belonged to the village community and was never regarded as the property of the king. The traditional or customary share of the king was fixed at one-sixth of the produce which in times of emergency was raised

to one-fourth. The State had merely a right to a share always paid in kind. Under the Moslems, the existing tenures and tax system were adopted with some modifications, and the share of the Government was raised to one-third. Under Akbar, the land revenue was fixed for a period of years payable in cash. To collect the revenue in a regular manner, headmen or tax farmers were appointed; and by the middle of the 17th century, zamindars, assignees and farmers of land taxes had greatly strengthened their position—a position which became hereditary in many cases due to the weakness of the central government.

When the East India Company acquired political control they took over the traditional system; but the whole character of the land system was transformed by them through the introduction of British legal concepts in India. It was assumed that the State was the supreme landlord. In the place of the traditional share of the Government in the produce paid by the village communities as a whole, there was introduced a system of fixed payments in cash assessed on land which had no reference to good or bad harvest. In most cases the assessment was individual, whether levied directly on the cultivator or on landlords appointed by the State. The land revenue was considered as a rent rather than tax. Under British rule, the system of assessing and collecting revenue varied according to the varying circumstances of different provinces and to suit administrative convenience.

The principle underlying the land revenue settlement today is that the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. Though this statement has been challenged, in practice it would appear to be a correct description of the relation between the Government and the cultivator. The official term for the method by which the land revenue is determined is "settlement."

Land tenures in India may be defined as the system of rights and responsibilities of individuals owning or cultivating the land, *vis-a-vis* the State, regarding the payment of revenue. The principal land tenures in India may be classified (1) on the basis of the relation between the holder and the Government as Zamindari and Ryotwari; (2) on the basis of the duration of the tenure as permanent and temporary. The Zamindari system makes the zamindar the holder of all lands from Government. He is responsible for the land revenue, the land being cultivated

by tenants. Under the Ryotwari system, the land is held directly by the ryot or occupant, who is in most cases individually responsible to Government for land revenue.[1] The Zamindari Settlement is ordinarily known as the Permanent Settlement, though there is another type known as the Temporary Zamindari system. The Permanent Settlement was introduced in Bengal by Lord Cornwallis in 1793. The system was later extended to parts of Bihar, Orissa and Madras. The Permanent Settlement covered 19 per cent of the total area of British India or roughly 120 million acres.

About 30 per cent of the total area was covered by the Temporary Zamindari system. According to Land Revenue Statistics, 1947-48, in Part A States 96 million acres, that is 24 per cent are covered by the Permanent Settlement, and 154 million acres, by Temporary Zamindari Settlement. Thus the Zamindari tenure covers 62 per cent of land. The remaining 38 per cent, i.e., 151 million acres in Part A States are under the Ryotwari System.[2] The temporary type of Zamindars are mostly to be found in Uttar Pradesh, Madhya Pradesh, Patiala, Hyderabad and some other States. A variant of Temporary Zamindari established in Madhya Pradesh is known as Malguzari in which the Malguzars or Patels who were tax farmers under the Marathas were subsequently regarded as proprietors.

The Ryotwari System

About 151 million acres, i.e., 38 per cent of the area in the Part A States are held under the Ryotwari Tenure. It prevails in Bombay, in most of Madras, in Berar and Assam. The Ryotwari Tenure is characterised by the following features: (a) The principle of the State ownership of all lands including waste lands underlies the system. (b) The holder of the land is a mere occupant, having the right to use, bequeath, transfer, and relinquish the occupancy of the holding. He holds the land so long as he pays the land revenue. The assessment is a charge upon the crop, and the arrears of previous years are a first charge on the holding. The revenue is regarded as rent and not as a tax, as a tax would imply the private ownership of land. (c) Every holder of land is individually responsible for the payment of

1 "In Bengal they (the British) created a caricature of English landed property on a large scale; in south eastern India a caricature of small allotment property; in the north west they transformed to the utmost of their ability the Indian commune with common ownership of the soil into a caricature of itself." (Marx, Capital, Vol. III pp. 392-3, quoted in the Congress Agrarian Reforms Committee Report, p. 34.)

2 Thirumalai, op. cit. p. 129.

land revenue. (d) The assessment is fixed for a period of 20 or 30 years and is periodically revised under a survey settlement. The successive settlements gave an opportunity to the Government to raise the land revenue.[1]

There are two kinds of Ryotwari holdings: (1) those in which each individual occupant holds directly from Government, and (2) those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue of the whole village area. In Madras, Assam and Bombay, the Ryotwari tenure is on the individual basis.

The indivilual being directly assessed, the village community lost its economic function. The peasant was given a proprietory right in the land which now became saleable and mortgageable for cash. This happened at a time when price economy was already making a headway in India. The assessment was fixed on the basis of land and not variable according to the yearly produce payable in cash at fixed periods. As a cumulative effect of all these factors, the importance of the money-lender in the rural economy was increased.

The Mahalwari System

A new system with joint or communal ownership of land known as the Mahalwari system was introduced in Agra and Oudh and later on in parts of the Punjab, when the permanent settlement policy was abandoned by the British Government in 1883. Under this system groups of owners or village communities were recognised as proprietors of land. But in this case, also, the collective proprietorship was only in name. There was a trend towards individual assessments, and in practice the co-proprietors were treated as individual proprietors.[2] The demand of the State varied from 40 to 70 per cent of the rentals. The periodic revision of settlement made possible the appropriation of a larger and larger share of agricultural income. As the share of revenue payable by each landholder was ascertainable and could be recovered separately, these cultivators were in the same position as the peasant proprietors under the Ryotwari System.

1 "Moderation shown at one settlement, during a time of distress, was liable to be followed by severity at the succeeding settlement, at the first sign of prosperity. The accumulation of agricultural wealth was impossible as long as settlement officers retained the power of varying the Land Tax at each recurring settlement according to their judgment. And any permanent improvement in the condition of the peasantry was impossible when the peasantry possessed no security against arbitrary enhancement of the State demand." (R. C. Dutt, "Economic History of India in the Victorian Age," 1903, 5th Ed. pp. 53-54).

2 R. Mukerjee, "Land Problems in India," 1933, p. 328.

Another category of settlements known as Jagirdari and Inam Settlements also call for notice. They are mostly to be found in Rajasthan, Madhya Bharat, Saurashtra, Hyderabad and in some parts of Madras and West Bengal. Under these settlements, the Jagirdars or Inamdars are given the right to collect rents from the actual occupants of land, but they have neither the right to hold or manage or cultivate the lands vested in them. The rental assets of the jagirs or inams were assigned to them in recognition of specific service rendered or to be rendered by them.

The Permanent Settlement

In Bengal due to a confusion in the minds of early British rulers between the Zamindars and the English landlords, the Zamindars—the former tax farmers or revenue collecting officials of the Moghuls—were recognised practically as the owners of the land, though in reality, they were land-holders and not proprietors, and were made responsible for the payment of a revenue fixed in perpetuity. As Sir Richard Temple says, the Permanent Settlement in Bengal was "a measure which was effected to naturalise the landed institutions of England among the natives of Bengal."[1]

The amount of revenue exacted from the tenants was high; in case of default the estates were sold to speculators. When the Settlement was first made, the assessment of the zamindar was fixed roughly at ten-elevenths of what the zamindar received in rents from the ryots. The remaining one-eleventh was regarded as a return for his trouble. Later history indicates that while the settlement of the zamindars remained unaltered, they went on increasing the rent from the tenants. With the cultivation of waste land and rise in the price of agricultural products, the rents recovered increased, whilst the earnings of landlords were exempt from the operation of the income-tax.

One result of the permanent revenue settlement was the creation of a class of zamindars with vested interests. They became the proprietors of big estates which never belonged to them; for they were merely the hereditary tax farmers or rent collectors. Another result was the loss to the ryot of his rights to a customary rent and a permanent tenure. The zamindars, though they could be sold out in case of default, soon degenerated into a selfish parasitic class of absentee landlords, and the

1 "Men and Events of My Time in India," p. 30.

Government lost an expanding revenue due to the permanent character of the settlement. It also increased rack-renting. One more consequence of the Permanent Settlement in Bengal has been the subdivision of rights in land. The zamindars leased out their interests, and the middlemen leased out in turn, creating a long chain of rent receivers and rent payers who intervene between the State and the actual cultivators. In 1819, "the absolute subjection of the cultivators of the soils to the direction of the zamindars" was regretfully admitted, and yet no steps to protect the tenants were taken till 1859. Thus, "feudalism on the one hand, serfdom on the other, were the principal characteristics of the land system of Bengal." What is more significant is the social change brought about by the Permanent Settlement. "By vesting the Zamindar with all residuary rights of property, the Government exalted their status and ensured a continuous improvement in their condition. On the other hand, the rights of the raiyats were exposed to damage. The practical security given by custom was shattered; in its place were substituted the shadowy protection of the courts, and a vague promise of succour in future. By thus undermining the protection of the raiyats and giving a new bias to the interests of the Zemindars, the Permanent Settlement altered the balance of rural society in Bengal."[1]

Effects of the Zamindari and Ryotwari System

Thus, under British rule, there was a complete transformation of the land system by which the State became the supreme landlord and the peasantry was reduced to the status of tenants. The landlords under the Permanent Settlement derived their right from the State and were liable to dispossession in case of default. The silent but revolutionary change made by the introduction of the Zamindari system, and the recognition of only a limited interest of the cultivator in the Ryotwari areas, neither benefited the cultivators nor the Government. In the permanently and temporarily settled areas the zamindar's share was allowed to grow. He was allowed to extort as much as he could by way of rent, while in the temporarily settled areas the State increased its share from the zamindars to 50 per cent of the latter's collection at the beginning of every revision. As early as 1893, a Lieutenant Governor of Bengal observed in connection with the Permanent Settlement: "In the interval of

1 S. Gopal, "The Permanent Settlement in Bengal and its Results," London, 1949, p. 25.

66 years, i.e., 1793 to 1859, while the proprietary body gained in strength and prospered in wealth, village communities perished."[1]

In both the cases, the effect has been the decay of the village community and the peasantry. The traditional relationship between the peasantry and the artisans, linked into a corporate unit like the village community, has been upset. "The creation of landlordism, the conversion of occupants into full proprietors and under-proprietors, and the emphasis on the distinction between the superior proprietors and under-proprietors," have been responsible for the deterioration of the economic position of the ryots and for the growth of a class of capitalistic rent receiving intermediaries. The system of individual assessment and the abrogation of the common rights have led to an aggravation of our agricultural problem.[2]

Land Revenue Commission, Bengal (1938-40)

A Land Revenue Commission was appointed in Bengal in 1938, with Sir Francis Floud as Chairman to examine the land revenue system with special reference to the Permanent Settlement. A majority of the Commission after pointing out the defects of the Zamindari system expressed themselves in favour of abolishing the system. They pointed out (1) that it has deprived Government of the share in the increment of the value of land due to increase in population and extension of cultivation; (2) that it has involved Government in the loss of revenue from minerals and fisheries; (3) that it has deprived Government of intimate knowledge of rural conditions such as the Ryotwari system affords; (4) that it has imposed on the province an iron framework which has had the effect of stifling initiative and enterprise of all classes; (5) that it has encouraged an excessive amount of sub-infeudation, creating a number of intermediate interests between the zamindar and the actual cultivator which in some districts has reached fantastic proportions. They quote in their support the memorandum of the Government of India on the land revenue policy in 1902.

1 Quoted by H. D. Malaviya in "Land Reforms in India," Delhi, 1954, p. 123.

2 R. Mukerjee, op. cit. p. 53. The Simon Commission refers to the "gross inequalities which prevail in the distribution of taxation." "A poor cultivator who not only pays to the State a substantial portion of his income from land but also bears the burden of the duties on sugar, kerosene oil, salt and other articles of general consumption, seems to receive very different treatment from the big Zamindar or landholder in areas where permanent settlement prevails, who owns extensive estates for which he may pay to the State a merely nominal charge fixed over a century ago and declared to be unalterable for ever, while his agricultural income is totally exempt from income tax." (Report of the Indian Statutory Commission, 1930, Vol. I.) Recently, however, some States like Madras, West Bengal, U. P., Bihar and Orissa have levied an agricultural income-tax.

The memorandum referred to the "evils of absenteeism, of management of estates by unsympathetic agents, and unhappy relations between landlord and tenant and of the multiplication of tenure holders or middlemen between the zamindar and the cultivator." The Permanent Settlement was described in the Memorandum as a system of agrarian tenure "which is not supported by the experience of any civilised country, which is not justified by the single great experiment that has been made in India, and was found in the latter case to place the tenant so unreservedly at the mercy of the landlord that the State has been compelled to employ for his protection a more stringent measure of legislation than has been found necessary in temporarily settled areas."[1]

The majority of the Commission were definitely of the opinion that no other solution than State acquisition will be adequate to remedy the defects of the present land system. "The present system," they said, "ought not to remain unaltered," and that "there should be some modification of the settlement." They maintained that the Permanent Settlement and the Zamindari system should be replaced by a Ryotwari system. "Whatever may have been the justification for the Permanent Settlement in 1793, it is no longer suited to the conditions of the present time." A majority of the Commission also came to the conclusion that the Zamindari system had developed so many defects that it had ceased to serve any national interest. No half measures would satisfactorily remedy its defects. "Provided that a practicable scheme can be devised to acquire the interests of all classes of rent receivers on reasonable terms, the policy should be to aim at bringing the actual cultivators into the position of tenants holding directly under Government."[2] Legislation on the basis of this Report was undertaken by the Government in the pre-Partitioned Bengal.

Landlords and Middlemen

The increase of middlemen is not confined to the permanently and temporarily settled tracts.[3] In Bengal itself the prob-

1 Land Revenue Commission Report Bengal, Vol. I, 1940, p. 36.

2 *Ibid*, p. 42.

3 Cf. "There is no doubt that there is an increasing tendency for ownership of land to pass out of hands of the cultivating classes. The transferees may be either non-agriculturists or agriculturists who have already got more than they could cultivate directly. There is no reason to suppose that the tendency has been arrested or reversed, and it may be presumed to have been rendered worse by the Bengal Tenancy Amendment Act of 1938 which, by removing restriction of the right of transfer, has greatly facilitated the passing of lands out of the hands of bonafide cultivators." (Famine Enquiry Commission Report, Appendix II c, p. 445).

lem of crop-sharers has become very serious, as about 20 per cent of the cultivable area is now cultivated by them, and they do not enjoy any legal protection. According to Dr. Gyan Chand, the reduction of half share of crop paid by the tenants-at-will to one-third, as suggested by the Bengal Land Revenue Commission, would mean 5½ times as much as is payable by the ryot, and 2-2/3 times that payable by the under-ryots.[1] In 1944-45, share-croppers cultivated about 25 per cent of the cultivated land, 20.6 per cent was cultivated by agricultural workers and only 35.8 per cent was cultivated by tenants with varying degrees of rights.[2]

These facts refer to undivided India. According to the census of 1951, in West Bengal there are 3 million share-croppers and 3 million landless labourers working on wages. In U.P., according to the Zamindari Abolition Committee Report, the area held by tenants of *Sir* sub-tenants is about 27 lakhs acres and the total number of such tenants is 27 lakhs. Dr. Radha Kamal Mukerjee puts the number at 32 lakhs.[3] In Madras 14 per cent of the agricultural population are landless tenants cultivating lands of others, and the total number of sub-tenants is estimated at 1.5 million. "While sub-tenancy is a feature of the agrarian economy of every province, it is difficult in the absence of proper records to give figures indicating the extent of sub-tenancy in each province."[4]

In Bombay, though under the Ryotwari System the land is supposed to belong to the peasant proprietor, there are "18,56,000 cultivators owning 1,86,56,000 acres, 522,600 non-agriculturists own 82,94,000 acres. In other words, the *per capita* land owned by the cultivating class is 10 acres, the land owned by the non-cultivating class is 15.9 acres."[5]

Owing to the practice of sub-letting, 30 per cent of the lands in Bombay and Madras Provinces are not cultivated by the tenants themselves. So also in the pre-Partitioned Punjab, the number of rent receivers had increased from six to ten million. In the United Provinces, the rent receivers increased by 46 per cent between 1891 and 1921 and during the same period in the Central Provinces, there was a 50 per cent increase. Referring to the Permanent Settlement of Bengal, the Simon

1 Congress Agrarian Reforms Committee Report, p. 37.
2 B. Sen, "Agrarian Crises in India and the Reactionary Plan" 1952, p. 28.
3 Congress Agrarian Reforms Committee Report, p. 37.
4 *Ibid.*
5 *Ibid.*, p. 40

Commission observed: "In some districts the sub-infeudation has grown to astonishing proportions, as many as 50 or more intermediary interests having been created between the zamindars at the top and the actual cultivator at the bottom."[1]

The increase in sub-infeudation has created an army of rent receivers who are all supported by the labour of the cultivator. It "has become an incubus on the working of agricultural population, which finds no justification in the performance of any material service, so far as agricutural improvements are concerned, and fails to provide for any effective means for the development of the resources of the land."[2] Even the Government was not induced to spend money for agricultural improvemnt, because the resulting benefits might be appropriated by these middlemen. Along with the growth of sub-infeudation, there has been progressive fragmentation of proprietory interests in the land due to laws of succession; and this has resulted in increasing the complexity of the land system.

Absentee landlordism, which is growing not only in the Zamindari System but also in the Ryotwari System, leads to inefficient management, and ruin of farming in the long run. There is an increase of non-cultivating land owners everywhere, even in the strongholds of cultivating proprietorship. This encroachment of landlordism has brought in its wake all the evils of spendthrift and inequitous land management.[3]

The tendency towards expropriation of the peasantry by money-lenders and capitalists has had its serious reactions in the political field. The growing consciousness of their rights on the part of the peasantry has resulted in the formation of the All-India Kisans Sabhas, and annual conferences have been held since 1936 for the ventilation of their grievances and the amelioration of their condition. Moreover, under the 1935 Constitution, political parties supporting their claims inspired fresh hopes in the hitherto depressed agricultural classes. On the other hand, in 1938, the first All-India Landholders' Conference was held with a view to set up an independent organisation. In the Constitution of 1935, landlords were given special representation in Provincial as well as Central legislatures. But the position of the majority of small cultivators, with their uneconomic holdings, and of sub-tenants and unprotected tenants has been very

1 Simon Commission Report, Vol. I, p. 340.
2 Floud Commission Report, p. 37.
3 R. Mukerjee, op. cit. p. 148.

nearly the same as that of labourers and it has been difficult at times to distinguish between them. As the Madras Banking Enquiry Committee observed, "We find it difficult to draw a clear line between cultivation by farm servants and sub-letting. Sub-letting is rarely on a money rental. It is commonly on a sharing system, the landlord getting 40 to 60 per cent, even 80 per cent of the yield and the tenant the rest. The tenant commonly goes on from year to year eking out a precarious living on such terms, borrowing from the landlord, being supplied by him with seed, cattle and implements. The farm servant, on the other hand, uses the landlord's seed, cattle and implements, gets advances in cash from time to time for petty requirements and is paid from the harvest either a lump sum of grain or proportion of the yield. The farm servant may in some cases be paid a little cash as well as a fixed amount of grain. The tenant may cultivate with his own stock and implements, but there is in practice no very clear line between the two; and when the landlord is an absentee, it is not always obvious whether the actual cultivator is a farmer or a sub-tenant."[1] Even in pre-Partitioned Punjab, the so-called land of peasant proprietors, only two-fifths of the land was cultivated by owners, while the rest was cultivated by tenants of different kinds. During the last 55 years there has been an increase in the number of cultivators who are tenants-at-will, i.e., tenants from year to year.[2] It has been estimated that out of the cultivated area of 31.17 million acres, 15.26 millions were held by tenants-at-will.[3]

Tenancy Legislation

The events connected with the no-rent campaigns on the part of tenants in different provinces and the rumblings about the repudiation of private debts led to more tenancy legislation for the amelioration of the tenants. The Bihar Tenancy Acts of 1937 and 1938 cancelled all enhancements of rents between 1911 and 1936, reduced rents in the same period in proportion to fall in prices, abolished the system of recovery of rents in kind, and provided for total or partial remission of rent where the soil had deteriorated due to deposit of sand or other causes. Similarly, the Bombay Small Holders Relief Act, 1938, prevented landlords from evicting a tenant who had been in possession from 1st January, 1932, provided the tenant had paid the rent due upto

1 Madras Provincial Banking Enquiry Report, 1930, pp. 14-15.

2 See "Tenant Cultivation in the Punjab," by T. Jain in *Eastern Economist*, December 1st, 1944.

3 "Land Tenures in India," Indian Agricultural Economic Society, p. 75.

June, 1938, and was willing to hold thereafter on the old terms. The Bengal Tenancy Act, 1938, reduced the rate of interest on rent arreas to 6½ per cent, withdrew the landlord's right of recovering rent arrears by auctioning lands, and suspended enhancement of rents for a period of ten years. The Bombay Land Revenue Code (Amendment) Act of 1939 passed under the Congress regime empowered the Government to vary the assessment in accordance with the prices of agricultural produce in deserving cases, and was expected to give relief to those areas where the existing assessment was very high.

These protective measures meant for the actual cultivators of the soil were partially rendered ineffective, due to the presence of intermediaries. Many of them remained unprotected tenants or swelled the ranks of the landless labourers. As the Floud Commission observed, "It is true that the successive provisions of the Tenancy Acts have endowed the raiyats with the practical ownership of land. But a large and increasing proportion of the actual cultivators have no part of the elements of ownership, no protection against excessive rents and no security of tenure."[1]

Land Revenue Administration

The general features of the land revenue administration whether Zamindari or Ryotwari, may be indicated under three heads: (a) The preparation of the cadastral record, (b) the assessment of the revenue, and (c) the collection of the revenue so assessed. The revenue is levied by means of a cash demand on each unit assessed. Under the Zamindari system, the demand is assessed on the village or estate owned by a single proprietor or by a body of co-sharers. The demand is a definite sum payable in perpetuity or for a fixed term of years, during which the whole of any increased profits which may accrue is enjoyed by the individual landlord. Under the Ryotwari system, the assessment is on each field as demarcated by the survey. The revenue rates for different classes of land are settled for a term of years. Except in Bombay, where the assessment is not fixed in terms of the produce at all, the revenue throughout India is assessed so as to represent a share of the "net produce." The meaning of the term "net produce" varies in different parts of India. In North India and in Madhya Pradesh, it represents the rent, or that portion of the gross produce which would, if the land were rented, be taken by the landlord. In Madras, on the other hand, where Government deals directly with the cultivator, the net produce is the

1 Report, p. 39.

difference between the assumed value of the gross produce and an estimate of the cost of production. For India as a whole, the calculated share of the net "assets" claimed by the Government is approximately one-half. Various provisions are made in the different States for exempting from assessment, either permanently or for a term of years, increases of income due to improvements—such as wells, tanks and embankments—made by private individuals and for the relief from over-assessment of holdings which have suffered deterioration since they were assessed.

Collection of Land Revenue

Owing to the prevalent poverty of the agricultural classes and also owing to the practice of obtaining two main crops during the year, the land revenue is generally recovered not by a single annual payment, but in instalments, the dates and amounts of which are fixed according to local conditions. For the recovery of sums not paid by the date, the Government has extensive powers conferred by law including compulsory attachment and sale. The Government of India in a resolution dated 25th March, 1905, laid down the principles to be followed by local governments in the matter of suspension or remission of land revenue. It was recognised that whilst it was legitimate to expect the cultivator to take the bad with the good in ordinary years, it was hopeless to expect him to be able to meet the fixed demand in years when the crops were barely sufficient for his own sustenance. Payments were not to be enforced on a cultivator of ordinary prudence if they impaired his future solvency in order to meet them. The resolution endorsed the view of the Famine Commission of 1901, that "relief will not ordinarily be required when there is half a normal crop." Total relief was to be granted where the crop was less than a quarter of the normal. No relief was to be ordinarily given to the revenue payer of the landlord class, unless it could be ensured by legislation or otherwise that a proportionate share of the relief was extended to the actual cultivators of the soil.

The statement that the land revenue under the Ryotwari system is not an appropriation of the unearned increment of the soil, but an encroachment on the bare minimum of subsistence, has a considerable element of truth. Where a large proportion of agricultural holdings are too small to be regarded as economic, the cultivators cannot afford the burden of the land revenue, and are compelled to resort to the money-lender to make good the

Government demand. The Famine Commission of 1901 observed with regard to the cultivator: "In good years he has nothing to hope for except a bare subsistence; in bad years he falls back on public charity."

The manner and time of collection of the land revenue create added difficulty for the cultivator. Usually he has no savings. If there is a failure of crops, he has to borrow and pay the Government demand. Even with a normal crop, he has to pay the land revenue in two instalments—one before the 15th January, and the other before the 15th March. He must have money at this time. Though he may have crop ready for sale, he cannot sell owing to slump in the market, because all the ryots are out for sale at the same time. He has to forego his profits or to borrow from the village *sahukar.*

A radical reform of the land revenue policy may be regarded as an essential condition for the improvement and development of agriculture in India. All talk about reducing or wiping off agricultural indebtedness is futile in the absence of a radical change in this direction. The State demand should only be levied on holdings which are economic, in whatever way the term "economic holding" be defined. The collection should be on an elastic basis, leaving a sufficient margin to the cultivator. The Taxation Enquiry Committee observed in this connection: "The income out of which the assessment is to be paid fluctuates enormously with the vagaries of the monsoon and other causes. Some relief is given in many provinces by the partial or complete suspension or remission of the assessment, when there is a failure of crop. But it is undoubtedly the fact that the inelasticity of the land revenue drives a large number of people to the money-lender during bad seasons." Whatever loss of revenue such measures may involve to the Government, it will be more than made up by the resulting material advance in the standard of living of the people. It may also be suggested that until a complete redistribution of land takes place, the poorest cultivators should be exempted altogether from the payment of the land revenue.

Incidence of Land Revenue

The incidence of the revenue charges in India varies according to the nature of the settlement, the class of tenure, and the type of holding. Under the Permanent Settlement, Bengal obtained a total land revenue of Rs. 3,14,00,000 in 1937-38. Under

Temporary Settlements, 50 per cent of the rental in the case of the Zamindari land is regarded as a maximum demand. In regard to Ryotwari tracts, it is difficult to give any figure that would be generally representative of the Government's share. Fifty years ago, the Government of India were invited in an influentially signed memorial to fix one-fifth of the gross produce as the Government's maximum demand. In reply to this memorial and other representations, the Government of India issued a resolution in 1905 in defence of their land revenue policy, which asserted that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact." This Resolution is still the authoritative exposition of the principles controlling the land revenue policy of the Government of India. The Resolution embodied the following principles: (1) In Zamindari tracts the standard of 50 per cent of the assets is more often departed from on the side of deficiency than excess. (2) The State does not hesitate to legislate in the interest of the tenants in the Zamindari tracts against oppression by landlords. (3) In Ryotwari tracts the policy of long term settlements is being extended. (4) Local taxation is neither immoderate nor burdensome. (5) Over-assessment is not a general or widespread source of poverty and cannot be regarded as a contributory cause of famine.

It may be safely maintained that there has been a continuous rise in land revenue, and that its incidence tends to be inequitable. Dr. Mann has shown the increase in revenue of a Deccan village from Rs. 889 in 1829-30 to Rs. 1,660 in 1914-15.[1] According to Radhakamal Mukerjee, "In Madras, Bombay and the U.P. in particular, assessments have gone up by leaps and bounds."[2] Even if prices go up, small cultivators are hardly in a position to benefit, as their produce is practically mortgaged to the *sahukar* who advances him money for seeds, etc. Moreover, prices fluctuate, but rent and revenue payments are relatively inelastic. After a comparison of increase in land revenue with the index number of agricultural income per head, Dr. Mukerjee concluded: "While the agricultural income during three decades increased roughly by 30, 60 and 23 per cent, the land revenue increased by 57, 22.6 and 15.5 per cent in the U.P., Madras and Bombay respectively. Such a large increase of land revenue coupled with its commutation in cash and its collection at harvest time has

1 "Land and Labour in a Deccan Village," 1917, pp. 42-43.
2 Op. cit. p. 206.

worked very unfavourably on the economic condition of cultivators of uneconomic holdings who form the majority in these Provinces."[1]

In Bengal the land revenue in 1764-65 was £811,000 which was increased to £1,470,000 in 1765-66. Under the Permanent Settlement it was raised to £3,000,000 in 1793.[2] The total land revenue increased from £15.3 million in 1857-8 to £20 million in 1911-12 and was 23 million in 1936-37. According to Khan Bahadhur S. M. Hosain, a member of the Floud Commission, rents in Bengal increased by 160 per cent between 1793 and 1940, and the increase in the net income of the Zamindars has been even greater—from Rs. 20 lakhs in 1793 to Rs. 832 lakhs in 1940 which means an increase of 4160 per cent.[3] According to a calculation made by Dr. Radha Kamal Mukerjee, the landlords appropriated during the last century and a half no less than Rs. 1,800 crores. Similarly, in the U. P., the State's share of the rent which in 1793 was 90 per cent came down in 1946 to 39 per cent. The increase in the rental demand between 1893-94 and 1943-44 is about 42 per cent, and in the land revenue only 15 per cent, the margin of profit of the intermediaries having increased by 70 per cent.[4] Thus, the burden of rent on the peasant increased from Rs 12.24 crores in 1893-94 to Rs. 17.53 crores in 1944-45; the major portion of this increase was appropriated by the intermediaries. The peak of profits for the landlords was reached in 1929-30 when with a rise in rent of 58 per cent and a corresponding rise of 19% in revenue, the landlords' profits increased by 96 per cent.[5] These figures do not, however, tell the whole story of the burden on the ryots. Over and above the regular rents, there are all sorts of illegal demands made by the Zamindars, known as abwabs, Nazaranas, salami, etc.

There has also been a tendency to increase assessment at each revision in the Ryotwari areas. In Bardoli as a result of the 'Satyagrah' movement by the peasants against excessive assessment, an official enquiry was undertaken which "established to the satisfaction of the Government of Bombay the fact that the assessment was altogether excessive."[6] Though in some

1 *Ibid.*, p. 345.

2 Minute of Mr. Shore, App. I quoted by R. C. Dutt, "Economic History of British India," p. 85.

3 Quoted by P. N. Driver, "Problems of Zamindari and Land Tenure Reconstruction in India," 1949, p. 63.

4 H. D. Malaviya, op. cit. p. 101.

5 Report of the U. P. Zamindari Abolition Committee, 1948, p. 346.

6 Moreland, "Peasants, Landholders and the State" in 'Modern India' 1932, p. 166.

cases, the incidence may have been less, the inelastic nature of the time of payment and the rigidity of assessment are also responsible for deterioration in the economic condition of the ryots.

In spite of the Government of India resolution of 1905, we feel inclined to observe that the land revenue system is partially responsible for the defective cultivation of land in India. The Taxation Enquiry Committee observed that it "drives a large number of people to the money-lender during bad seasons"; and it is responsible for the scarcity of capital which results from cutting down the narrow margin between the net produce of the cultivator and the minimum of subsistence. There could be no more trenchant criticism of the Land Revenue System than the verdict of the Taxation Enquiry Committee.[1]

Concluding Remarks

Thus in this country, the exacting demands of the State are added on to the demands of middlemen and absentee landlords with no interest in the improvement of the land. Modern landlordism in India is a vested interest, like the survival of feudalism in 18th century Europe. But in India, it is not so much the survival of earlier institutions as a product of mistaken legislation. The landed magnates, whether the Zamindars of Bengal or the Talukdars of Oudh or the large landowners of the Canal Colonies in the Punjab, have neglected their duties towards the ryots, done very little towards the improvement of the land, and contributed by their indifference and neglect to the growing impoverishment of the agricultural classes.

The land tenures of India reveal an extremely unsatisfactory condition with regard to the relations between landlords and tenants. Palliative measures like tenancy laws cannot remove the evils connected with the irresponsible absentee landlordism, that has come into existence under the present system. "The landlords have encroached upon and restricted rights in the village commons, neglected their duties towards irrigation, levied illegal cesses, and displayed little practical interest in the improvement of the conditions of the tenants."[2] Relations have become more strained with increasing sub-infeudation, a greater gulf has been created between the landholder and the actual

1 Report of the Taxation Enquiry Committee, pp. 77-78.

2 Cf. "The landlord has become rent receiver rather than wealth producer, having ceased to play his old and honourable part in the agricultural combination. To-day he neither supplies agricultural capital nor controls farming operations. Below him has developed a class of intermediaries who have profited from the complexities of the present land system and make the difficult position of the actual cultivator still more precarious. This is no criticism but a summary of facts." R. Mukerjee, op. cit. p. 361.

cultivators. The increase of middlemen everywhere as a result of sub-letting has lowered the economic status of the ryot. Pending the complete liquidation of these parasitic middlemen and landlords, better relations between landlords and tenants can only be established, if rents are reduced to such an extent that the cultivator is left with an adequate surplus and the landlord ceases to be a rent receiver and is transformed into a producer of agricultural wealth.

The advent of Independence has brought a change of outlook of a radical character in relation to the Zamindari system. Congress had long ago been committed to the idea of the removal of intermediaries between the peasant and the State.[1] Soon after 1947, measures for the abolition of the Zamindari system were taken in hand in different States. The Agrarian Reforms Committee in its report in 1949 recommended abolition, the expropriated land to be transferred to the cultivator with limitations on his right to sublet.

The laws for abolition introduced in different States have two principles in common—(a) abolition of intermediaries between the State and the cultivator, and (b) the payment of compensation to landowners. There are differences between State and State in the provision concerning the level and method of compensation. In most cases existing rents form the basis for the determination of compensation, while in others compensation is to be on the basis of reduced rents. In Uttar Pradesh and Madhya Pradesh the tenants have to contribute to a State fund from which the State's obligations to the landlords are to be met. The irony of such a method is that the victims of exploitation by the Zamindars are to be made to pay compensation to their exploiters for having exploited them in the past. The rates of compensation range from Rs. 3 per acre in Madhya Pradesh, and Rs. 9 per acre in Madras, to Rs. 27 per acre in Uttar Pradesh and Rs. 38 in Bihar.[2] There are also differences in the provisions concerning maximum and minimum holdings. The upper limits vary from 50 to 125 acres. Some laws prescribe that this area must be cultivated by the landlord himself. Some of the Acts include provision for compulsory consolidation of fragmented

1 Election Manifesto of 1946.

2 Bihar enacted the Abolition of Zamindari Act in 1948 and the Land Reforms Bill in 1949. Madhya Pradesh, the Abolition of Proprietory Rights Bill, 1949, and the Agricultural Raiyats and Tenants Act 1950. Assam has passed the State Acquisition of Zamindaris Bill, 1948. Bombay has passed a series of Acts between 1949 and 1950 involving the abolition of Khoti, Talukdari, Mehwasi and Maleki tenures among others.

holdings. Others provide for the unification of uneconomic holdings.

The legislation undertaken in different States after Independence is the outcome of a policy the outlines of which were laid down as early as 1928 by the Congress. "The abolition of landlordism must occupy a prominent place in our programme." Dealing with this question at the Annual Session of the U.P. Congress Committee in 1928, Pandit Nehru observed: "How are we to abolish the big estates? Some advocate confiscation and others full compensation. The latter is on the face of it impossible, as we cannot find the enormous amount of money for it. And if we could find money, the burden on the land will continue and the present holder will certainly not profit by the change. The only person who will profit will be the Zamindar....who will get hard cash instead of a varying and troublesome source of income. Besides there is no attempt at equalisation of wealth if full compensation is given....In no event, therefore, can we give full compensation."

"Confiscation, on the other hand, though equitably perfectly justifiable, may lead to many cases of hardship. I would suggest, therefore, that some compensation might be given, specially in cases of hardship. But compensation should certainly not be given so as to make the receiver of it a wealthy man again."[1]

Power brings a sense of responsibility with it. Perhaps the influence of Gandhiji, looking upon property as a trust may have also played a part in bringing about a change in outlook. For, with a free India already in being in 1948, the Congress Agrarian Reforms Committee implicitly recognises the principle of compensation to the owner of land. This principle was incorporated in the Indian Constitution, Article 31, which says that no property shall be taken possession of or acquired for public purposes under any law, unless the law provides for compensation for the property acquired and fixes the amount of the compensation or specifies the principles upon which the compensation is to be determined and given.

Accordngly, the Zamindari Abolition Acts adopted in various States provide for compensation. The determination of compen-

1 Quoted by H. D. Malaviya, op. cit. p. 21. We quote it as indicative of the change in outlook between then (1928) and now (since Independence) Louis Fisher reproduces in his "A week with Gandhi" an interview with Gandhiji in 1942. "What is your programme for the lot of the peasantry"? I asked. 'The peasants would take the land.' he replied. "We would not have to tell them to take it." 'Should the landlords be compensated'? I asked. 'No', he said. 'That would be fiscally impossible.' 'You see,' he smiled. Our gratitude to our millionaire friends does not prevent us from saying such things.'" (Quoted in "Land Reforms in India," op. cit. p. 71).

sation is provided for on the basis of "net income" in Assam, Bihar, Madhya Pradesh and U.P. In Madras the term used is "the basic annual sum." The net income is arrived at by deducting from the gross income of the Zamindar items like the land revenue, cost of management, works of benefit to the ryot, etc. No deduction under the last head is provided for in the U.P. and Madhya Pradesh Bills. The Madras method, instead of basing compensation on the net income, fixed it at an amount roughly equivalent to 25 per cent of the land revenue demand after the Ryotwari tenure is introduced in these areas. The payment of compensation is to be 8 times the net assets in U.P. In addition, rehabilitation grants are to be paid, from 20 times to twice the net assets to Zamindars whose land revenue does not exceed Rs. 5,000. The Assam Bill allows for compensation equivalent to 3 to 15 times the net income according to the size of the income. An article contributed to the Reserve Bank of India Monthly Bulletin, in June 1950, estimates the average amount of compensation per acre involved in the abolition of Zamindari rights as shown in the following table:—

State	Area involved in 00,000 acres	Amount of total in crores of Rs.	Compensation average per acre
Madras	174.16	15.5	9
U.P.	525	140	27
Bihar	396.94	150	38
Madhya Pradesh (excluding merged territories)	394.4	68.5	17
West Bengal	127	25	20
Orissa	100	10	10
Assam	16.72	5	30
	1734.22	**414**	**24**

A second table from the same source shows the amount of additional annual revenue which might accrue from the abolition of Zamindari:

State	Amount of compensation in crores of Rs.	Additional annual revenue in crores of Rs.	Additional annual revenue as percentage of total compensation
Madras .. .	15.5	1	6.45
U.P. .. .	140	7	5
Bihar .. .	150	6.5	4.33
Madhya Pradesh .	68.5	2.75	4
West Bengal .	25	1.4	5.6
Orissa .. .	10	.67	6.7
Assam .. .	5	.20	4
	414	**19.52**	**4.71**

To the total amount of compensation thus calculated has to be added the compensation amounts to intermediaries in Hyderabad, Saurashtra, Madhya Bharat, Rajasthan, Vindhya Pradesh, etc., for which accurate figures are not available. It would not be inaccurate to suggest that compensation to the zamindars in the Indian Union as a whole would involve a liability of about Rs. 550 crores. If Gandhiji could without compunction contemplate, as late as 1942, the possibility of confiscation of Zamindari property, it is difficult to understand why the followers of Gandhiji who are now in power, and who do not hesitate to use Gandhiji's name for sanctifying a variety of laws and administrative measures, should be so scrupulous in this matter of giving adequate compensation to those who may well be regarded as social parasites. The sanctity of the Constitution is urged as a plea in defence. But this sanctity has already been violated on more than one occasion; all sanctity is instrumental to human life which alone is sacred. To preserve the sanctity of the Constitution in this matter of compensation involves a burden on the very victims of social injustice.

The Five Year Plan lays down a comprehensive policy for land reform. It accepts the principle of abolition of Zamindari. It adumbrates, on the completion of such abolition, the establishment of an adequate administrative machinery. It recommends the adoption of a ceiling on future acquisition of land; it advocates reduction of rents and security of tenure for the tenants, the fixing of a minimum size of holdings for the prevention of subdivision, management of all lands in excess of the limit, making them available for the resettlement of landless workers, and the encouragement and promotion of co-operative farming societies. The Planning Commission has ignored almost completely the implications of compensation for abolition of Zamindari; it has failed to take into consideration the desirability and urgency of a co-ordinated land policy. and given free scope to the policy of provincial vagaries under the plea of decentralisation.

Quite apart from the question of compensation to the big landholders, doubts have been raised if the abolition of big estate holders will effectively meet the problem of intermediaries. If the removal of intermediaries between the State and the cultivator is the main objective behind land reform in India, such an objective is frustrated in a State like Madras, where a new set of rentiers have come on the land in the shape of ex-political prisoners who have been granted lands by the Madras

State, superseding existing rights of cultivation by Harijans. New landlords have taken the place of former zamindars. Moreover, impersonal revenue administration in ryotwari areas and a low land revenue attract investors who purchase land with the sole idea of renting them out for a profit. It has been observed that money-lenders, war profiteers and blackmarket operators have invested their surplus income in land which offers them security, a high return and a means of avoiding income tax. The Planning Commission seem to have overlooked this aspect in their measures of land reform[1]

Are we in a position, then, we ask again to bring about a closer relation between the State and the cultivating occupants of land? Today, the State is regarded as an agency only interested in exacting the assessed revenue, so far as the cultivators are concerned. With the increasing pressure of debt, and the size of the holding becoming more and more uneconomic, whilst the assessment demands show no signs of abating, there is a growing feeling of hostility to the State. This feeling is aggravated by the increasing dispossession of the peasantry by money-lenders and capitalist investors in land. It is not to be wondered at that all this led the peasantry to enter with alacrity into the "no-rent" campaign. The social and political crisis that looms in the near future might perhaps be averted by a total exemption from the payment of land revenue of all those whose agricultural income is below a certain minimum. The Punjab Land Revenue Committee decided against any exemption, evidently on grounds of loss of revenue. But a loss of revenue is a subsidiary consideration, when we remember that the body politic can justify its claim to existence to the extent to which it promotes the well-being of its members.

The peasantry today is caught within the pincers of rack-renting on the one hand and mounting debts on the other. We shall see later on how in the industrial sphere, finance capitalism and the concentration of direction and control of industries in

1 The Government of India do not appear to have been entirely oblivious of the impediments in the way of land reform in the country. In reply to a questionnaire issued by a Committee of the Economic and Social Council on Land Reform the Government of India state that among the impediments to land reforms are "(1) lack of data concerning the various aspects of the agrarian structure; (2) difficulty of setting up proper administrative machinery; (3) the financial burden imposed on the State as a result of the need of paying compensation; (4) the inability of tenants to pay for the acquisition of ownership rights; (5) the traditional individualism of the farmer and his attachment to land, which retard the pace of such reforms as consolidation of holdings and development of co-operative farming; (6) growing pressure of population on land and the absence of alternative avenues of employment; (7) constitutional and legal objections raised by the landlord against the validity of the Acts for the abolition of their rights in land in different States from time to time, which delayed the implementation of legislation." ("Progress in Land Reform' U. N. Department of Economic Affairs, 1954, p. 59).

the hands of a few tend to the creation of an industrial proletariat side by side with the agricultural proletariat. The growth of this vast multitude of the "have-nots," supplemented by a rapidly increasing population, is symptomatic of a serious threat to social and economic stability, which may at any time burst into revolution.

The Indian cultivator, ousted from his land, can legitimately ask for a restoration of his land, though the landed interest will clamour against such a change as revolutionary. The ryot was expropriated without compensation and left to the mercy of the landlord and the money-lender. He was converted into a serf working on land on starvation wages. An expropriation of the Zamindars and the restoration of the ryots to their original status would be a less revolutionary and a healthier change than the introduction of the Permanent Settlement was in 1793.

A peasantry attached to the soil, struggling with the uncertainties of the rainfall and a climate that saps their energy, which cannot read an account or write a receipt, faced with a depression like that which began in 1929, roused by promises of political parties and agitators, cultivating strips of land which do not yield enough for subsistence, may be infuriated into an attitude of hostility which may pass into open rebellion against the landowners. Such rebellion may be put down by force aided by the Government. Legislation may be at the best a palliative. The land reform movement started since the advent of Independence with the huge liabilities which the principle of compensation involves, is a prolonged process attendant with growing dissatisfaction on the part of the rural population. All that we need to urge is that the agricultural prosperity of India is the foundation of the prosperity of the people as a whole. Flood and famine, falling prices and rack-renting by landlords, poverty and indebtedness marked the history of the last hundred years of Indian agriculture. No reform would be too radical, no measures too revolutionary, no plans too costly that result in the emergence of a contented and happy rural population.

CHAPTER XVI

THE AGRICULTURAL PROLETARIAT

According to the 1951 Census, the agricultural population of India is 249.1 million, out of a total population of 356.8 million. Thus about 70 per cent of the total population derive their livelihood from agriculture. But the agrarian structure is of

a pyramidal character, with a small number of Zamindars owning large tracts of land,—at times a number of entire villages—at the apex, and at the bottom millions of farmers owning small plots, the rack-rented bargadars and landless labourers many of whom are bonded slaves. The constant changes in classification that have characterised the Census reports in this country and the complexities introduced by the merger of the former Indian Princes' States as well as the Partition make it difficult to determine accurately the extent of disguised unemployment that prevails; but there is no doubt that this surplus agricultural population sunk in abject poverty is one of the formidable obstacles to the planned economic development of our country.

The Famine Commission of 1880 struck one of the earliest notes of warning about the growth of a surplus population on the soil, the landless labourers who live a half-starved existence in the villages, finding employment for a few months in the year, or sometimes none at all. The growth of this class may be accounted for by the increase of absentee landlords, by the transfer of land from the hands of cultivators into the hands of their creditors, by the displacement of village crafts and industries due to the spread and use of machine-made products, by the gradual transformation of the old village economy resting on custom and payment in kind into a price economy based on contract. Every circumstance which has weakened the position of the small holder, as Radhakamal Mukerjee observes, has increased the supply of agricultural labourers—"the loss of common rights in the rural economy, the disuse of collective enterprise, the subdivision of holdings, the multiplication of rent receivers, free mortgaging and transfer of land, and the decline of cottage industries."[1] The fractionalisation of land very often compels the cultivator to supplement his meagre earnings by working on the farms of others. In a normal decade, when there are no famines or epidemics, the landless labourers tend to increase faster than the rest of the rural population.

In Madras, for every thousand of agricultural population the non-cultivating classes numbered 77 in 1921, as compared with 20 in 1901. The following table shows the increasing number of absentee landlords and proletariat per 1000 persons engaged in cultivation in Madras:—[2]

1 Op. cit. p. 215.

2 P. P. Pillai, "Economic Conditions in India," 1925, p. 114 (for figures from 1901 to 1921) and Census Report for Madras, 1931, p. 198.

	1901	1911	1921	1931
Non-working landlords ..	19	23	49	34
Non-working tenants ..	1	4	28	16
Working landlords ..	484	426	381	390
Working tenants	151	207	225	120
Proletariat	345	340	317	429

We get the following returns from the Bengal Census Report:—

	1921 (in 000's)	1931 (in 000's)	Percentage increase or decrease
Non-cultivating landlords or rent receivers	390	634	+62
Cultivating owners and tenants	9,275	6,041	—35
Proletariat	1,805	2,719	+50

The following table indicates the growth of the agricultural proletariat:—[1]

	1911	1921 (in 000's)	1931
Landlords	2,845	3,727	3,257
Cultivators	71,096	74,665	61,180
Agricultural Labourers	25,879	21,676[2]	31,480
Others (market gardeners, cattle raisers, foresters etc.)	5,196	4,608	6,536

In the decade 1921-31, the proportion of agricultural labourers to cultivators increased at a rapid rate as inndicated by the following table:—[3]

	Principal Occupation			
	1921		1931	
	Workers—farm servants plus field labourers	Ordinary cultivators	Agricultural labourers	Actual workers, cultivating owners plus tenant cultivators
Total figures ..	21,676,107	74,664,886	24,925,357	61,180,004
Ratio	291	1,000	407	1,000

In spite of the change in classification adopted in 1931 Census, which gives us an apparent decline in the agricultural population, these figures reveal the tendency to an increasing landless population. Writing in a minute to the Floud Commission Report, Dr. Radha Kumud Mukerjee observed, "Bengal's total population amounts to a little over 5 crores. It would appear that of this total population only about 137 lakhs are registered as 'principal earners,' whose 'working dependants' number about 7 lakhs. This means that 71 per cent of Bengal's

1 Statistical Abstract of British India, 1915 onwards and Abstract of Tables, 1911 Census.

2 The fall in numbers between 1911 and 1921 was due to influenza and other epidemics.

3 Census Report, Vol. I Part I, 1931, p. 288.

total population do not earn their livelihood and may be taken to be unemployed."[1] In almost all provinces, there has been a decline in cultivating landowners. Even in the Punjab, along with the concentration of land in the hands of big owners, there is an increase in the number of cultivating tenants and tenants-at-will. The increase in the number of transfers due to sales of land has contributed to the process of swelling the numbers of the landless proletariat. The number of transfers increased from 40,000 in 1905-6 to 115,000 in 1938-9. The fall in prices after 1929 added to the burden of indebtedness and compelled small owners to sell their tiny plots to pay the Government dues. The same tendency is revealed by figures of usufructuary mortgages of land which rose from 10 per cent of the total cultivated area in 1922-3 to 13 per cent constituting 4 million acres of land in 1936-37.[2] The growth of population compels even some of the cultivating owners of small plots to supplement the proceeds of their holdings by doing outside work.

Thus the growth in the number of the agricultural proletariat is a marked feature of our rural economy. In 1882, the Census Report gave 7½million as "landless day labourers" in agriculture. This number increased to 21.5 in 1921 and to 33 million in 1931. These figures relate to undivided India. In the Indian Union, according to the Census of 1951, the number of agricultural labourers is 44.8 million. According to an estimate of the Government of India published in a U.N.O. report on Land Reform, 4 per cent of the agricultural population are rent receivers, somewhat under a third are owner-cultivators, and another third agricultural labourers.[3] There can be no doubt that the number continues to increase as has been revealed in various village enquiries. In the village of Khirhar in North Bihar, the agricultural proletariat forms 72 per cent of the total population of the village comprising 1167 families with 7003 people according to Mr. Sarkar.[4] In South India, the Resurvey points out that the existence of an increasing number of landless peasants has become a big problem and has assumed a grave aspect due to increasing landlordism and an increasing consciousness on the part of these peasants of their own economic and social emancipation.[5] The large-scale

1 Floud Commission Report, Vol. I p. 318.
2 T. Jain, op. cit.
3 "Land Reform-Defects in Agrarian Structure as Obstacles to Economic Development," U. N., 1951, p. 53.
4 *Indian Journal of Economics*, July, 1939, pp. 94-96.
5 Op. cit. p. 347 *et seq.*

ejectment of cultivators in the last two decades is indicative of the worsening of the problem. The following table from the U.P. Abolition of Zamindari Committee Report shows that, despite the so-called agricultural prosperity, there is hardly any improvement, judging by the number of ejectments of the cultivators:—

	Total No. of cases in which ejectment was ordered	Arrears of rent cases	Relinquishments	Total area from which cultivators were ejected (acres)
1926-27 to 1928-29	219,60	766,303	76,972	347,421
1929-30 to 1932-33	362,159	1,318,002	209,893	880,810
1933-34 to 1936-37	398,036	1,310,155	110,914	911,655
1937-38 to 1938-39	125,405	618,022	26,769	210,474
1939-40 to 1943-44	452,333	1,209,184	72,846	N.A.

The depression years show a marked increase in the number of cases of rent arrears, but the war years indicate no improvement in the situation, in spite of the alleged agricultural prosperity and the consequent increased ability of the cultivators to pay rent. The area of land affected by ejectment orders as shown in the last column in the table is significant as evidence of the harm done to production by the transfer of land from cultivators to the creditors. But the hardships of the cultivators did not end with ejectment. Till 1939, the decree of rent arrears could be realised, even after ejectment, from other properties of the tenant. Cases have been noted where the tenants' belongings, like household utensils, frame work of doors, thatched roof, were attached for recovery of arrears. The U.P. Tenancy Act of 1939, however, enacted that all arrears of rent were to be wiped off after the ejectment of the tenant from his holding.[1]

A recent survey of a few typical villages in the Konkan region of Bombay State by Dr. Donde revealed that during successive generations the percentage of owner-cultivators to the total agricultural population had declined from 57 to 41 and then to 30. Another survey of 268 families in Gujarat (Bombay State) showed that in one generation the percentage of owner-cultivators had declined from 46.5 to 31.[2]

We have already described elsewhere the tendency towards increasing absentee landlordism and towards the expropriation of the cultivators by non-cultivating investors and money-lenders.

One of the factors, that has contributed to the growth of an increasing class of landless labourers, is the economic transition

1 Pp. 348-49.

2 Quoted by Prof. M. L. Dantwala in an article "Land Reforms in India" in *International Labour Review*, Nov-Dec. 1952, pp. 427-28.

through which some of the criminal tribes and castes of India have been passing. Many of them sought refuge in jungles and foothills. In most tribal areas the original tribal system was one of a village headman and ryotwari tenure. Under the land revenue policy of the British Government, a limited number of persons were given proprietary rights. These rights were gradually lost as money-lenders and traders exploited the ignorance and improvidence of these primitive people. Most of them were converted from tenants into landless labourers. This has happened to the Gonds in the C.P., the Bhils in Central India, the Korwas in the U.P. and the Mundas in Chota Nagpur.[1]

After the Partition, the Agrarian Reforms Committee estimates the number of landless agricultural labourers at 3½ crores and including dependants at 10 crores. That these figures may not be very accurate is borne out by an observation of Dr. A. H. Lorenzo: "If the census were held in July and November or March, a large number of persons will be shown as agricultural labourers; but if it were taken in May and June the ranks of agricultural labourers will be thinned out proportionately in favour of the unspecified class."[2] The Rural Banking Enquiry Committee estimates that less than 20 per cent of the agriculturists own 67.7 per cent of the total agricultural lands in Bombay, 74.7 per cent in the Punjab and 35.1 per cent in the U.P. According to Rangnekar, in 1950, in a single district of Ferozepur in East Punjab more than 2000 ejectment notices were served on tenants-at-will who, before Partition, were lease-holders.[3] There have been frequent cases of forcible seizure of land by landlords and zamindars and eviction of cultivating-landholders. The various Tenancy Acts passed in a number of States have not given adequate protection to the ryots and there is a fast decline in the size of the *per capita* holding.

There has been a twofold tendency in regard to labourers on land. In a number of provinces, whilst ordinary cultivators show a remarkable increase in numbers, there has been a decrease in the number of farm servants and field labourers. There is a tendency for the cultivating owner to relinquish his land to the non-cultivating money-lender from whom he obtains the land again as a tenant. Between 1891 and 1921 in Bengal, whilst the number of ordinary cultivators and dependants increased from 29.7 million to 30.5 million, the number of farm servants and

1 "Economic Problems of Modern India," Vol. I., op. cit. p. 42.
2 Quoted in Agrarian Reforms Committee Report, p. 114.
3 Op. cit., p. 94.

field labourers diminished from 3.6 million to 1.8 million. In C.P. in the same period, rent receivers increased by 52 per cent. The extension of cultivation with an increase in population has made the size of the holding uneconomical, and has driven the hired labourers from employment on land to seek work as earth workers, road-menders, and other occupations, and in the last resort to purchase a strip of land by falling into the hands of the money-lender.[1] This economic tendency also explains the large increase in the class of unspecified workers in census returns.

Classes of Agricultural Labourers

The Congress Agrarian Reforms Committee classifies agricultural labourers into three groups, viz., field labourers, ordinary labourers and skilled labourers. The field labourers include ploughmen, reapers, sowers, weeders and transplanters. The majority of these are engaged in seasonal type of work, but some amongst them are employed all the year round. Ordinary labourers are employed in building embankments, digging, silt cleaning and other jobs. The skilled labourers include carpenters, masons, blacksmiths and others who are employed by cultivators on the same rates as agricultural labourers. In these classes of labourers there is a substantial number of women and children. Taking all the occupations together there are 465 females per thousand male workers. Women are employed in semi-skilled work, like weeding, husking and reaping. Child labour is also very common in agriculture. Children are found employed in operations like weeding, husking, watching crops. The age of such children ranges between 10 and 15 and they are found to labour from 6 in the morning to late in the evening.[2]

The Agricultural Labour Enquiry Committee in their report distinguish between the "attached" workers employed by the big landholders and whose employment is more or less permanent and the "casual" workers who form the bulk of the agricultural labour force. Between them come a class of labourers who are styled "seasonal," but who can scarcely be distinguished from "casual" workers. The "permanent" workers are employed for a period of time by the assignment of lodging on the farm, the modes of payment being determined by custom and tradition.

The following table shows the relative proportion of attached and casual workers in some of the States:—[3]

1 "Land Problems of India," op. cit. pp. 217 *et seq.*

2 Report, pp. 114-15.

3 Agricultural Labour Enquiry Committee Report, Vol. I, 1952, p. 31.

	Percentage of casual to total number of workers	Percentage of attached workers
Part A		
West Bengal	94.3	5.7
Assam	93.8	6.2
Bombay	85.7	14.3
Madras	92.4	7.6
Punjab	76.5	23.5
Part B		
Travancore Cochin	99.9	0.1
Hyderabad	87.2	12.8
Pepsu	26.1	73.9
Part C		
Kutch	100	—
Coorg	95.3	4.7
Bilaspur	60	40

Economic Condition of Agricultural Labourers

Agricultural labourers are often paid in kind. They receive a share in the crop together with other customary dues. The Chamars in the U.P. who supply the bulk of agricultural labour get 1/13th part of the produce of barley and 1/16th part of wheat. In Bengal reapers are paid in kind at the rate of one bundle for 10 bundles they cut. The attached workers in Bengal were drawn from the backward classes, and were indebted to their employers. The loans were advanced on condition that the borrower or any other member of the family would remain attached with the creditor for agricultural work and often for domestic work. They were known as *Mahindars* and *Krisans*.[2] His wages were paid in cash or in paddy equivalent to Rs. 100 per year. He was given two daily meals, two dhotis and two pieces of cloth. Casual labour was employed on a daily basis and payment made in cash or in kind.

In Bombay, in an enquiry of 990 villages it was found that cash wages without supplement were usual in 233 villages and grain wages in 376 villages. Wages in kind were about 5 seers of jowar, while cash wages were 8 to 10 annas a day in the more prosperous villages.[2] In Madras the casual workers were paid in cash or in kind, payment varying from Rs. 1 to annas 8 a day.[3] Attached workers were not allowed to work for any person other than their regular employer. In Bihar an attached worker was usually advanced a sum of Rs. 50 to Rs. 100 in the beginning of the year, and unless and until he returned the sum, he was not permitted to leave his employer. He was to make himself avail-

1 *Ibid.*, pp. 182-83.
2 Congress Agrarian Reforms Committee Report, p. 116.
3 Agricultural Labour Enquiry Committee Report, Vol. I, op. cit. pp. 114 *et seq*.

able at the employer's farm whenever required, even though the employer did not provide him with regular work. In some cases the ancestors of the present workers had acquired plots of land from their employers as gifts. Such employers or their heirs did not, however, recognise the gifts and always threatened the workers with eviction if the latter did not work as attached workers.[1]

The terms of employment of attached workers and the methods of paying them varied from State to State. The permanent workers were largely men, and they were known locally by different names. The Agricultural Labour Enquiry Committee gives detailed lists of yearly wages in different A Class States and in relation to different agricultural operations, earned by permanent workers. They range from a maximum of Rs. 2-14-0 a day including supplementaries to 6 annas a day. For Part B and C States the range of variations for attached workers is between Rs. 60 and Rs. 15 per month.

An intensive study of 1,592 families in 24 villages of Gokak Taluka, Bombay State, undertaken in 1940 by Dr. M. N. Desai revealed that labourers on non-irrigated lands received Rs. 25 per annum per head and those on irrigated lands Rs. 31 per annum. The average income of the Harijans who constituted the greater part of the landless workers in these 24 villages was Rs. 29 per head. "To say that they are breathing will be more appropriate than to describe them as living in this world."[2]

Mr. J. V. Bhave, in a survey of a Berar village,[3] pointed out that out of 377 families in the village 43.7 per cent were landlords, 30.7 per cent were agricultural labourers and 11.6 per cent were tenants. The permanent labourers were employed on a yearly contract with wages varying from Rs. 3 to Rs. 8 per month. Out of 318 workers, only 30 were employed as permanent labourers. The employment of the rest was most uncertain. Here too, the problems of agricultural labourers were connected with untouchability, as most of the labourers are untouchables.

Lag Between Wages and Prices

Dr. Mukerjee gives us the following table regarding wages and price of rice in Bengal during eighty years:—[4]

1 *Ibid.*, p. 68.
2 "Life and Living in Rural Karnatak," 1945.
3 "A Survey of Landless Agricultural Labour in Shindurijana Bazar," in *Indian Journal of Social Work*, March, 1943.
4 Op. cit. p. 222.

	1842	1852	1862	1872	1911	1922
Field labour without food (in annas) ..	1	1½	2	3	4	4 to 6
Price of rice (seers per Re.) ..	40	30	27.1	22.7	15	5

The money wages rose four to six times during this period, and the price of rice increased eight times. In brief, real wages fell by 20 to 50 per cent. The Quinquennial Wage Survey Report in the U.P. (1934) recorded the average wage at 3 annas a day. In 326 villages, it was 1½ anna only.

The Agricultural Labour Enquiry Committee's findings on wage rates refer to post-war conditions. Prof. N. G. Ranga's investigations in South Indian villages undertaken in 1926 indicated that five out of nine families among the Panchamas suffered from under-consumption of cereals.[1] Thomas and Ramakrishnan's Resurvey of South Indian villages suggests that only 2/3 of the income necessary for subsistence was earned by the landless labourer. The second world war substantially increased the wages of agricultural labourers. But during 1939-45, though wages in Madras rose from 100 to 300 per cent, the landless labourers and farm servants incurred greater debts than before.[2] The figures quoted by the Congress Agrarian Reforms Committee on the basis of two inlependent surveys in U.P. by Prof. Sridhar Misra and Prof. Vir Bahadur Singh show that during 1939-47, the rise in agricultural wages varied between 260 to 360% (1939=100) according to the agricultural tract; but it was more than offset by the great increase in cost of living ranging from 356 to 764% in different parts of the country. The wage lag behind costs and prices was as high as 276% in some cases.[3]

Many of the Provincial Governments in their replies to the questionnaire of the Bengal Famine Enquiry Commission pointed out that the fall in the rates of wages of the post-war period may have been due to demobilisation and fall in the demand for labour in the war time industries. This may have ultimately affected agricultural labourers. The detailed investigations of the Agricultural Labour Enquiry Committee into the wages of every State show that where wages have not fallen behind the rise in prices, they have not been proportionately higher. The Committee conclude: "In certain States the pre-war agricultural wage levels were so low that even though the increase of wages in 1949-50 over pre-war rates may be impressive, the

1 Congress Agrarian Reforms Committee Report, p. 117.
2 Narayanswami Naidu, op. cit., p. 62.
3 Report, pp. 118-19.

wages by themselves were by no means high. Such instances were observed in the States of Bihar, Orissa, Madhya Pradesh, etc. Subject to the above limitations, it appears that in Assam, Bihar, Bombay, Orissa, Punjab and Uttar Pradesh, wages appear broadly to have kept up with price advances of certain staple articles as between 1938-39 and 1949-50, while in Madhya Pradesh, Madras and West Bengal, agricultural wage rates seemed to lag behind prices."[1]

Serfdom in India

At the bottom of the agricultural ladder in India are those labourers whose conditions are not very different from those of serfs. Agricultural serfdom is most prevalent in those parts of India where the lower and depressed classes are most numerous. Thus in Bombay, Madras, Malabar, Cochin, Madhya Pradesh, Central India and Chota Nagpur, where we have a large aboriginal population, the condition of the agricultural labourer is very much like that of a slave. An official report describes serf labour in the following terms: "The average agricultural labourer is not infrequently compelled in times of stress to mortgage his personal liberty. In return for a small sum of money, which he may happen to need at the moment, he agrees to serve the man from whom he has borrowed. The money is not repaid, nor is it intended to be repaid; but the borrower remains a life-long bond-slave of his creditor. For his work, he merely receives an inadequate dole of food and to all intents and purposes is in the position of a medieval serf."[2] This agrarian serf labour is regularised in such a manner that some of the regions have a special name for it, e.g. Hali in Gujarat, Kaimuti in South Bihar, Janouri in North Bihar, Gothi in Orissa, Pannal-pathiram in Tamil Nad, Gassi-gullu in Andhra, Bhagela in Hyderabad, Sanwak in Oudh, Harawah in Central India States, Jeetha in Karnatak and Barsalia in the M.P.[3]

In the Bombay State we have Dublas and Kolis who serve in their masters' households as serfs for a number of generations. They may have received money for their marriage expenses, giving an undertaking to serve till they pay off their debt. They are fed and clothed by their masters. On the east coast of Madras, similarly, many of the agricultural labourers

1 Report, Vol. I, op. cit. p. 43.

2 Quoted by Dinker Desai, "Agrarian Serfdom in India," in *Indian Sociologist*, July, 1942.

3 Ibid. For a detailed nomenclature of such workers see Agricultural Labour Enquiry Committee Report, Vol. I, op. cit. p. 32.

are Pariahs who are known as Padials. The Padial is a serf who has fallen into hereditary dependence on a landowner from whom he has borrowed money. The money may have been borrowed either for his own marriage or for that of his son or daughter. The borrower undertook to work for the lender until the debt was repaid. Such loans are, however, never repaid and the Padials themselves are being attached to the soil and go with the land when it is sold or the owner dies. In Madras, the Padial's wages are paid in kind equivalent to Rs. 3-12 per month in terms of money. In Orissa, there are three kinds of hired labourers: (1) The Chakar or Baramasiya labourer engaged for 12 months with board and lodging and Rs. 24 in cash. His ancestor may have obtained a loan from his employer. (2) The Naga Muliya, who also works as a yearly servant, but receives instead of board and lodging, 4 seers of paddy, and a plot of land to cultivate free of rent. (3) The Danda Muliya, who is employed for a short period on specified wages. In Bihar, there are the Kamias or bond-servants who having borrowed money, bind themselves to perform whatever menial services are required of them by their masters. These depressed castes who have no land or security pledge their labour, whenever they want a loan; and not only their labour but that of their wives and dependants. Very often it happens that the joint wages of the Kamia and his wife are not sufficient to feed them and their children. Legislation was introduced in Bihar and Orissa in 1920, declaring that such agreements between borrower and lender were void unless the full terms of the agreement were expressed in a stamped document, or if the period of agreement exceeded one year. The Act did not prove effective, and a large number of serfs still work on the estates of Zamindars.[1]

An economic survey of the village of Atgam in South Gujarat undertaken by Mr. Mukhtyar in 1929, reveals a system of permanent labourers known as Halis who belong to the Dubla community and serve their creditors from year to year, being unable to repay the loan during their life-time. The Halis get their wages in kind or in some parts in cash. Their wives serve in the house of their husband's masters, and their sons are employed as herdsmen. When translated into money the total amount of wages of a Hali family worked out at 6½ annas per day. Mr. Mukhtyar observed that while the actual output of work per day by a Hali was often less than that of a free labourer, the rate of wages paid

1 R. Mukerjee, op. cit. pp. 227 et seq.

to a Hali was higher.[1] The Hali system is both uneconomical and inefficient; but the big farmers who employ the Hali adhere to the system as there is growing migration of free labourers to the towns and cities. Similarly, Mr. J. B. Shukla in a study of 14 villages of the Olpad Taluka in Gujarat called attention to the same system. These Halis serve their creditors from year to year being unable to repay the loan during their life-time. The Hali has been called an indentured labourer, a freeman *de jure* but a serf *de facto*.[2] He is the backbone of the rural economy of the Surat District. In 1921, out of 84,000 Halis in the Bombay Province, 57,000, i.e., about 67 per cent were found in Surat District alone.[3] According to Mr. Sumant Mehta, the region of the Tapti river in Gujarat has about a lakh of serfs. "The Hali goes on drudging from year to year. He effects an escape from the drudgery either by death or by running away to a distant place from his village."[4] The same story is revealed in a survey of villages in the Bhiwandi Taluka, Thana District, by Dr. Bhagat who points out that the labourers from the Varli and Katkari communities borrow money on the occasion of marriages and agree to serve their masters at the rate of Rs. 10 a year.[5]

Forced Labour

Dr. Lorenzo in a study on Agricultural Labour in Northern India describes various form of *begar* or forced labour prevailing in different States in Northern India. The most common forms are (a *Hal Beth*, for ploughing, (b) *Kodal Beth*, for weeding and watering, (c) *Dhan Beth*, for harvesting the crop, (d) *Miseni Beth* for thrashing, (e) *Chakran Begar* rendering two or three days service in return for living in a hut on landlord's land. Prof. Sridhar Misra in his evidence before the Congress Agrarian Reforms Committee pointed to a common remark: "the landholder has allowed us to live in his domain, we have to work for him."

1 Op. cit., pp. 161 *et seq.*

Cf. "They are not employed at their own convenience on wages but are maintained usually hereditarily as permanent estate servants, by the larger landlords—furnished by these with homes and food, and not regarded as in a position to resign service and seek any other occupation. There is virtually no difference between the position of these Halis and the slaves of the American plantations prior to the Civil War, except that the courts would not recognise the rights of the master as absolute over person and services. But in this country where—more probably than in others—the rich have a better chance in the courts than the poor, this difference diminishes in importance. We might describe the situation by saying that these Halis are free men *de jure*, but serfs or slaves *de facto*." (Census Report, Bombay Presidency, 1921, Part I pp. 219-23.)

2 Op. cit., pp. 117 *et seq.*

3 Bombay Census Report, 1921, Part I, p. 20.

4 J. B. Shukla, op. cit. p. 118. A Committee under the chairmanship of Prof. M. L. Dantwala was appointed by the Government of Bombay to make an enquiry into the Hali system some years ago. The report of the Committee has not yet been published, though submitted long back.

5 Op. cit. p. 212.

Conditions of forced labour seem to prevail all over the country. Writing about the aboriginal population of the Thana District an officer reports: "All jungle tract tenants who cultivate by 'khad' (i.e. those who pay fixed rent in kind, and not a crop share) are liable to be called upon to work for their landlords....If they refuse or procrastinate they are liable to assaults or beatings.... I was told on creditable authority of men being tied up to posts and whipped. Such occurrences I can vouch for. There are also rumours of men in the past having been killed."[1] This system of exacting forced labour from cultivating tenants exists in almost all the States.

Discussing the question of *begar* the Agricultural Labour Enquiry Committee calls it "involuntary labour" and observes that it is a characteristic feature of our agricultural economy. It prevails generally among attached workers. With a view to making the attached workers remain in service for a long time, it is usual for landholders to advance loans or allot plots of land free of interest or rent. "The inability of workers to repay the advances has led to certain practices of exacting labour either at nominal wages or even without them. Thus a type of indentured labour prevails in certain States."[2]

Apart from *begar* or *veth* (forced labour), there is a system of levying *abwabs* or illegal exactions which survives in Bengal and Bihar. It has reduced the cultivators to semi-serfdom. Sometimes these exactions take the form of marriage fees, sometimes they are fines for social offences, sometimes they are taxes for carrying on certain trades. These exactions deprive the peasantry of a large portion of their already meagre income. The *abwab* is employed not only as an engine of financial extortion but of physical oppression. "In Rajshahi," according to a settlement report, "landlords wield a sort of sovereign power dispensing justice and imposing taxes." According to another report, "in some of the remoter parts of Pabna, the Zamindar's agents still assume summary but unauthorised magisterial functions, fining, and, at times, imprisoning those whom they convict." Added to all this is the process of gradual expropriation of the cultivators by money-lenders, driving the aboriginals into the ranks of servile tenants liable to forced labour and the payment of illegal exac-

1 Quoted by Mr. Desai in "Agrarian Serfdom in India," op. cit. Cf. "Such is the class solidarity of the Dhaniamas (masters) that a Hali who has deserted one Dhaniama would never be employed by another. While enquiring in Tanjore district about the Panneyals, we found the same unity among the masters making any change of master almost impossible for the Panneyals." (Congress Agrarian Reforms Committee Report, p. 129.)

2 Report, Vol. I, p. 45.

tions. Agrarian serfdom thus lingers on in India—a relic of the Middle Ages which might well be regarded as one of the darkest blemishes in the economic life of present-day India.

The Government of India as early as 1931, pursuant to the Draft Convention adopted at the International Labour Conference in Geneva in 1930, brought a Resolution before the Legislature empowering it to take action on the provisions of the Convention. Administrative instructions were issued in some of the Provinces to stop the use of forced labour. In 1948 an officer was appointed to inquire and report on the desirability of further legislation. On the report submitted by him several States were asked to take steps to amend or repeal provisions in enactments which offended against the abolition of forced labour. Madras, Punjab, Uttar Pradesh have agreed to delete sections in the Canal and Drainage Act and the Compulsory Labour Act which empower the Governments to requisition compulsory labour. The Constitution of India guarantees legal protection against forced labour. Article 23(1) forbids forced labour, and makes it an offence under the Indian Penal Code to exact forced labour. That this Constitutional guarantee is ineffective to an extent is admitted by the Agricultural Labour Enquiry Committee which reported that forced labour in some form or other was being exacted in 74 sample villages spread over different States.[1]

Minimum Wage

The desirability of fixing minimum wages, as a part of social security for workers, was considered for the first time at a Tripartite Labour Conference held in 1943. Acting on the recommendations of the Conference the Government of India started enquiries to investigate into the conditions of agricultural workers. A Minimum Wages Act was passed in 1948 which provided that the "appropriate Government shall fix before the expiry of three years, in the case of an employment specified in Part II of the Schedule, or two years in any other case, the minimum rates of wages payable to employees in all scheduled employments." Schedule II refers to employment in agriculture, that is to say, in any form of farming, including tillage of the soil, dairy farming, raising of livestock, etc. As a preliminary step, the Government of India undertook in 1949 an all-India Enquiry into the conditions of agricultural workers, with a view to considering measures including the fixation of a minimum wage under the Minimum Wages Act, 1948. As the enquiry could not be completed within the period allowed

1 Report, Vol. I, p. 47.

in the Act, the Act was amended extending the time to the end of 1953. According to the Report, rates of minimum wages have been fixed so far in nine States, including Punjab, Delhi, Bihar and Uttar Pradesh. The wages vary from State to State according to local conditions and the nature of the occupation from Rs. 2 per day to As. 12 per day. Difficulties in the application of a minimum wage law in agriculture are obvious. It is often difficult to distinguish between a small farmer who works in the field on his own farm and an agricultural labourer. The same workers take a hand in different operations which are to be paid for at different rates. The number of workers involved in agriculture is far greater than in industry, and they are scattered throughout the country in accessible and inaccessible places. It is difficult to organise them in Trade Unions and it is equally difficult to secure effective inspection for detection of cases of contravention. In an unorganised agricultural ecconomy, it is difficult to determine costs or known methods of accounting, and labour costs may adversely affect efficiency in agriculture. Finally, the influx of labour in one part of the country or district due to favourable wages may create scarcity of labour in others.

The Bhoodan Movement

While the minimum wage legislation is intended to secure an adequate wage for agricultural workers, the Land Gift movement, popularly known as 'Bhoodan' initiated by Acharya Vinoba Bhave, a colleague of Gandhiji, is an attempt to solve the problem of the landless labourers by the redistribution of land on a voluntary basis. He aims at getting gifts of land from big landowners by appealing to their sense of higher human values and distributing them among the landless. The movement has obtained the blessings of the Planning Commission and of the Government, as it is believed by them to be calculated to create a proper atmosphere for land reforms. Several States have either passed, or are considering legislation for the proper allotment and management of such gift lands. We are told that about 35 lakhs of acres have been so far collected by Bhoodan workers all over the country, though the target fixed by Vinoba Bhave is 5 crores of acres.

Apart from the good intentions behind the movement, it is difficult to understand how such a movement which in the initial stages evoked some enthusiasm, but which has later cooled down, could ever hope to solve the problem of settling 45 million landless labourers on the soil. The movement is based on the possibility of changing the hearts of the "haves," so that the "have-

nots" can be helped. History and understanding of human nature alike seem to point to the futility of such a hope. Already instances have been pointed out in which barren land has been gifted as a convenient method of exhibiting generosity. The fear of dispossession through violence may have also inspired the gesture of gifts. To hope to solve the problem of landless labourers by such a "non-violent revolution" as the Bhoodan movement has been termed is, to say the least, extremely naive in the context of our present-day society with its commercialised outlook. Vested interests in India are not different from vested interests in other parts of the world—and we are not surprised that the patience of the leaders of this non-violent movement is already exhausted by the lack of adequate response from the landlords. For these leaders have begun talking about launching a "satyagraha" for achieving their objective. Charity can never solve an economic problem of such huge dimensions.

Concluding Obeservations

The experts who constituted the Agricultural Commission with Lord Linlithgow as Chairman in their comprehensive report seem to have overlooked or ignored the problem of our agricultural proletariat. The problem was outside the purview of the Labour Commission. No protective measures, even of the simplest character, could, therefore, be thought of to help this enormous mass of our population except those contained in the famine code giving relief by employment in times of famine. The majority of this mass belong to the Harijan class—the most ignorant as well as the most helpless of India's population—which likewise "forms the pool from which the urban workers are recruited." The problem in our country is thus twofold—it is a problem of improving the conditions of the industrial workers as much as those of the agricultural proletariat.

"The multiplication of landless labourers from decade to decade is the surest symptom of agrarian unsettlement in India which expressed itself in the fury of petty thefts and bazar looting."[1] This landless class hangs about the country side, adds to the already existing inefficiency of agriculture and is a permanent obstacle to the introduction of better methods and the improvement of agricultural tools. It is this same class which driven by starvation into the cities lowers the wages of town-workers and impedes the rapid growth of trade unionism, housing improvement and civic amelioration. Speaking at the Second Conference

1 Bhave op. cit.

of Agricultural Labourers, Dr. P. Sitaramayya observed: "A series of intermediaries has come into being between Government and the ultimate cultivator who spends the day between slush and mud, who works now with a starving stomach and now with half-appeased appetite, who knows no rest in storm or sunshine, who often times has no dwelling site which he can call his own. He grows our paddy but starves. He feeds our milch cows but never knows anything beyond canjee and water; he fills our granaries but has to beg each day's rations for the rest of the year. He digs our wells, but cannot touch them for his use; he clears our tanks but must keep off them when they are full. He is a perpetual hewer of wood and drawer of water for those who fatten on his labour, and rise to wealth and plenty on his skeleton."[1]

Dr. Sitaramayya in his address at the same conference suggested the need for collecting data for a colonisation scheme for the Harijans and the landless population to be run by co-operative societies carrying on joint production on a co-operative basis. The society would borrow money and assign land on leases for 12 years after which time the lands would become productive and paying. "Even a machine plough cannot fertilise land the soil of which is alkaline in character, the levels of which are uneven, the surface of which is overgrown with bush and hawthorn, the sides of which are not provided with irrigation and drainage channels, the contents of which are not manured. When all these are provided, an aeroplane need not scatter the seed, pumps need not water the fields, machines need not turn up the soil. We have such abundant manpower that we are the richest in the world for labour resources next only to China."[2]

Short of such comprehensive planning, we have in our landless proletariat the breeding ground for a revolution that may threaten the very foundations of our social and economic life. Agrarian unrest and crime may be the premonitory symptoms of an upheaval involving 45 millions of agricultural labourers, "the long suffering serfs" who are the first victims of disease, pestilences and famines. With a low vitality and living on the margin of subsistence, with no hopes for a better future, with a growing consciousness of the injustice and wrongs of the present economic system, they are pliant material in the hands of political agitators. We are faced with a dilemma—the difficulties of *planning for a* rural economy which would guarantee a decent living for all, or looking on with folded hands and leaving things to drift while

1 Presidential speech reported in *Rural India, May*, 1940.
2 *Ibid.*

the clouds gather and the rains destroy a superstructure from under which the ground is already washed away.

CHAPTER XVII

A LONG-TERM AGRICULTURAL POLICY

We have now surveyed the agricultural problem of India in all its main aspects. The agricultural situation of India today, not taking into account the exceptional circumstances created by the war, gives legitimate cause for serious apprehension. We have seen how the process of fragmentation and subdivision of lands has been aggravated by an increasing population, clamouring for the cultivation of small strips of land in order to avoid starvation. In almost every State, there are hundreds of thousands of cultivators barely eking out a living by the cultivation of uneconomic holdings. compelled to incur debts with very little prospect of getting freed from the burden, and living under the constant dread of starvation due to the caprices of the rainfall. We have also seen how the increasing pressure of population on the soil has involved a strain upon its fertility turning, in some places, fertile land into swamps and jungles.

We must not, however, overlook the increasing efforts made by the Central and State Governments of late towards the development of our agricultural industry. Those efforts are directed towards an increase in the yield of crops, and to the extension of the cultivation of cash crops of marketable value. The importance of animal husbandry is increasingly recognised.There is likewise an increasing recognition of the need for forest conservation. An active interest is being taken in fruit culture, and in poultry and agriculture as subsidiary industries. Legislation in land reform has attracted attention. And provision of credit facilities through co-operative societies has met with increasing support.

But whilst we recognise the earnestness of these efforts and the good intentions behind them, we cannot help taking note of certain broad facts in the economic situation so far as it affects agriculture. When we try to analyse the poverty of the agricultural population, we cannot overemphasise economic changes brought about by British rule. The adoption of a protectionist policy by Great Britain in the early half of the 19th century in England, the subsequent change to free trade policy which proved most suitable to her, and the adoption of free trade policy in India,

brought about the destruction of the handicraft economy by the dumping of machine-made products in India. The loss of occupational equilibrium which followed upon the disappearance of rural industries was aggravated by a policy of indifference to, if not deliberate retardation of, the industrialisation of the country. The peace which British rule brought in its wake has been followed by an increase in the population with its corollary in the shape of Malthusian checks like starvation and disease. We find no tangible evidence of adequate measures for rendering the labour of the increasing population more productive. The present administrative structure involves an overhead expenditure too great for a poverty-stricken population. To these facts are to be added the merciless exploitation of the toiling peasants by the landowners and the middlemen and the usurious activities of the village *sahukars*. Can India continue her slowly changing life while the rest of the world has been changing so fast? She is in the stream of world events. The predominant cause of many of her ailments and particularly her agricultural backwardness is not what a foreign government did or omitted to do, nor is it to be sought for in the conservatism of her agricultural methods, or in her social and religious institutions. The most outstanding fact which has characterised the changes in the economic life of India in the past hundred years of British rule is the fact that she has been suddenly faced with the problem of adjusting her economic fabric, based upon custom and the village as the self-sufficient unit, to a competitive organisation based upon prices determined in an international market. If Indian agriculture was a gamble in the rains in the past, it has became a gamble in world prices to-day. Methods of production which were adapted to a village economy cannot work successfully in a competitive economy. No well-planned policy devised to bring about a transition from the old to the new order of agricultural life could have been reasonably looked for from a government with a century of *laissez-faire* traditions behind it; and tinkering with our agricultural problem which fails to take account of this fundamental fact can have no chance of reasonable success.[1]

It may also be observed that the increasing expropriation of the peasantry which marks our economic history has not resulted

1 This aspect of the agricultural problem of India has been particularly stressed in "The Economic Problem of India," by T. N. Ramaswamy, 1942. Even Dr. Vera Anstey writing in a half apologetic tone recognises the importance of this factor: "Specialised production for commercial crops has greatly increased, self-sufficiency has declined, and India has been brought within the orbit of world prices. Local and seasonal price fluctuations have by these means been greatly reduced but at the expense of increasing dependence upon world price trends and the trade cycle." "Modern India and the West," op. cit. p. 290.

in the development of capitalist farming in our country as it has done in Western countries. The flow of capital to agriculture is not productive but parasitic, and has not led to the development of large-scale farming. Investment of capital in agriculture is not regarded as a paying proposition in India due to the sudden transition from a village economy to an international price economy. It is not unnatural that the Bombay Industrialists' Plan did not grow eloquent over the development of agriculture by capital investment on an ambitious scale.[1]

It is gratifying to note, however, that the Planning Commission realise the basic importance of agricultural reorganisation and reform in their scheme of planned economic development. "While the several parts of the nation's economy," they observe, "are mutually interdependent, the success of the whole plan will vitally depend on the results achieved in making the most advantageous use of the land and labour resources engaged in agriculture."[2] The first priority is given by the Commission to agriculture and irrigation in the allocation of resources.

When we turn from the details of agricultural conditions and methods to the larger problem of agricultural policy, we need to keep in mind two fundamental considerations. In the first place, we need to have a clear conception of the aim behind our policy. In the second place, any long-term policy involving revolutionary changes must be capable of absorbing the elements of value in the existing social structure.

From the earliest days, agriculture has occupied a large place in national policies, not only because of the importance of food for the growing population, but also because of the importance of raw material which the land alone can yield for the building up of industries. There have been countries in the past that have fostered agriculture as the main source of national strength. There have been others which have virtually disregarded agriculture, content to be dependent on imported food and raw materials. There have been still others, who have thought in terms of self-sufficiency aiming at the satisfaction of their own agricultural needs without seeking to derive any large income from the export of its agricultural surpluses.

At the stage of economic evolution at which the world has arrived to-day, when scientific technological knowledge has

1 Cf. "As long as capitalism remains what it is surplus capital will never be utilised for the purpose of raising the standard of living of the masses in a given country, for this would mean a decline in profits for the capitalist." (Lenin. Selected Works, Vol. V, p. 57).

2 First Five Year Plan, p. 153.

made extreme types of economic specialisation possible, we might have expected the smaller countries of the world to resort to a policy of intensive development of a single line of production, whereas countries of wide geographical extent and considerable diversity of resources would aim at a high degree of self-sufficiency. Great Britain in the last century was a typical illustration of an industrialised country content to rely upon overseas producers for the bulk of her food and having a sense of security in the possession of a powerful navy. The war of 1914-18 so thoroughly undermined this sense of security as to give rise to a hysterical agitation for rehabilitation of agriculture even to the extreme demand on the part of a few to make Great Britain self-sufficient in the staples of subsistence. But Britain with the memories of the threat of famine under conditions of submarine warfare did not completely succeed in reviving her agricultural industry during the inter-war period. It endeavoured to effect a favourable exchange situation between her products and the agricultural products of the members of the Empire. During the course of the second world war, she made fresh endeavours to revive her agriculture. Her policy was reoriented so as to bring more land under cultivation and increase the output by intensive and extensive methods. 45 per cent more land was brought under cultivation after the outbreak of the war, and the output of cereals increased by 50 per cent as compared with 1940-41. Every possible encouragement extending to direct subsidies was offered for the development of agriculture. British agriculture today is producing 56 per cent more food than before the war. It is an achievement due to a considerable increase in mechanisation and capital investment resulting in increased productivity.

Similarly in the U.S.S.R., though the long run policy was the development of manufacturing industries with a view to economic self-sufficiency, the immediate need was more a need for agricultural development, as the large majority of war population was still engaged in farming. This necessitated a policy of continuous stimulation of the agricultural production. The truth that the agricultural policy in the U.S.S.R. serves to illustrate is that a well-planned policy of socialisation in food production, whether through State management and control and cultivation of land or through collective and co-operative farms, can only succeed, if it is co-ordinated to other phases of economic life and even generally to the social and cultural pattern of the life of the nation.

The importance of the food problem has forced itself upon the attention of the nations during the war and post-war years. An editorial article in *Nature* in 1942 observed, "There are huge blocks of human life, in India and China for example, where the standard of diet is not of the same order as the minimum proposed by the Technical Commission of the League of Nations. Europe with a population little more than one-third of that of Asia consumes more cereals and six times as much wheat. A world of such gross inequalities cannot be stable."[1] So far as our own country is concerned, the preceding discussion of our agricultural problem has already made it clear that, as a result mainly of indifference and neglect, there has been an enormous wastage of our agricultural resources. We are buying from abroad commodities which could be produced at least as cheaply in our own country, if our internal resources were fully developed. We are importing also commodities when substitutes of equal or greater nutritive value are available at home. We have become dependent on other countries for various articles of food. We were importing, taking a pre-war year 1938-39, about three crores worth of "provisions and oilman's stores" every year, including cheese, condensed milk, jams, fruits, fish and farinaceous foods. There are few articles in this list which could not be produced at least as cheaply from our own resources.

From 1941 our foreign trade has undergone far reaching changes. Lack of shipping facilities, suspension of trade with enemy countries, exchange control—all alike contributed to the reduction of our exports and imports alike. If this reduction had shaken us up out of our lethargy and stimulated our home production it would have been all to the good. There was awakend, no doubt, an increase in State interest in agriculture, but inspite of efforts like the Grow More Food, there has not been a marked increase in our food production.

The outbreak of war led to a deterioration in our economic situation. The post-war period brought with it the Partition of the country and far reaching structural changes in our agricultural economy. We became overnight a deficit country not only in respect of food but also in raw cotton and jute. The imports of food made heavy enchroachments on our foreign exchange resources which might otherwise have helped to build

1 "Poverty anywhere constitutes a danger to prosperity everywhere." Declaration of 26th Session of I. L. O.

up our industries. The parts of our country now incorporated in Pakistan have become a foreign market, and the political tension that exists creates difficulties in the free flow of goods between the two countries.

The difficulties created by the war and the Partition of the country aroused the leaders to an appreciation of the need for abandoning the traditional *laissez faire* attitude. After the advent of Independence, there has been a growing awareness that the food problem is not a problem only for the administrator and the research worker, but a social responsibility. The reports of the National Planning Committee bear witness to this awakening consciousness. The Crop Planning and Production Committee observe: "One of the most important items in planning scientifically the national economy of this country....and the largest single field for employment, labour and capital has not received from the appropriate sub-committee the attention that is its due."[1]

An Agrarian Reforms Committee was likewise appointed in 1947 by the Indian National Congress to report upon the reforms that would be necessitated by the abolition of Zamindaris and large landed estates; and now we have under the First Five Year Plan a striking national endeavour at an integrated plan for increasing production in which the topmost priority is given to agriculture. In their proposals for increasing agricultural output so as to make the country self-sufficient in respect of food, the Planning Commission are actuated by two definite objectives —the increase of agricultural production by a diversification of the agricultural economy with a view to raising it to maximum efficiency and to ensure social equity by a reduction of disparities in wealth and income, by eliminating exploitation through middlemen, and by providing security for the tenants in their holdings. The Planning Commission recognise that a redistribution of land of the larger landed proprietors will not solve the problems of landless labour and uneconomic holdings; they recognise the diversity of conditions that prevail in different parts of the country. They are aware of the disparity of interests between the small and the middle owner, between the tenant and the landless labourer. They refrain from proposing any uniform pattern of organisation. They refer in somewhat vague terms to the possibilities of co-operative village management, "so that the village may become a vital progressive and self-governing base of the structure of national planning.[2]

1 Crops Planning and Production, National Planning Committee, 1948, p. 17.
2 First Five Year Plan, p. 197.

Assuming that our objective in agriculture is economic self-sufficiency with a possible margin of exportable surplus, which would enable us to buy our industrial requirements, the next question that arises is the measures by which this objective can be attained. When we take into account the extent and the rapid growth of the agricultural indebtedness, the fragmentation and sub-division of the land in every part of the country, the rapidly increasing population, and the simplicity of agricultural tools and methods to which the ryots are used for ages, it might almost seem a task beyond the capacity of man to transform this land of medieval feudatories on the one hand, and rack-rented poverty-stricken ryots on the other, into a land of milk and honey. The authors of this work have no illusions as to the practicability and ease with which a new agricultural policy can be inaugurated in this country. The results of centuries of traditions and methods cannot be wiped off in a few years even by a successful social revolution. Settled modes of administration cannot be broken up without producing reactions which it is impossible to anticipate. The mores of corporate life have a method of avenging themselves in case they are deliberately set aside. But whilst all this may be true, there are occasions in the life of nations as of individuals when a drastic situation demands drastic remedies. The agricultural situation in India has reached such a stage in its history. Its food resources do not expand with its ever increasing population. More land cannot be easily brought under cutivation with present methods. The futility of the tinkering expedients of the last hundred years stands out in marked contrast to some of the bolder war time measures forced upon a Government still reluctant to give up its *laissez faire* attitude.

A study of the agrarian policy of Russia before the outbreak of the revolution in 1917 offers a remarkable parallel to the history of agricultural policy in India. In one sense, the Czarist experiments for the development of agriculture were more vigorous and were on a far more liberal scale of expenditure than was possible in India. The main problem in Russia was the poverty of the peasants and the large number of the landless proletariat. Between 1908 and 1912, the use of artificial manures in Russia increased by 400 per cent. The output of agricultural machinery advanced enormously in the same period. The yield of land showed a rapid increase. And yet the main problem remained unsolved. The standard of living of the rural classes

showed no improvement and even declined. The increase in population resulted in continual subdivision of farms. The total number of holdings had increased in a period of 30 years from 9 to 12 million. The cultivating class except the well-to-do kulaks continued primitive types of farming. The rural economy of Czarist Russia presents features which have their parallel in the rural economy of India—uneconomic holdings, continuing subdivision, small strips of land, farmed by men with no capital of any kind, unable to profit by the advances of scientific methods.[1] We may or may not experiment in India on the lines of Russia. But if the uneconomic agriculture of our days is to be transformed into a flourishing agriculture, providing the millions with the means of a comfortable existence, we need a radical change in our policy and the abandonment of what we might call a policy of nibbling characteristic of the past.

Be it said to the credit of our national government that the First Five Year Plan has sought to avoid a policy of tinkering with details and evolved a comprehensive project with definite objectives. The main objective has been to increase the production of the country as a whole with a view to improve the miserable standard of existence to which the masses have been accustomed. It has been called "a preliminary effort at creating the proper environment for future planning."[2] The Plan suffers from certain obvious limitations. The statistical data on which the Plan is based are mostly halting and often speculative, as the Commission themselves admit. Whilst the Plan grows eloquent over the prospects of increasing production, by laying down targets which are in themselves hypothetical, the main objective that of raising the standard of living of the masses may be frustrated by the mechanism of a capitalist structure of society with its marked inequalities of wealth and income. The targets are hypothetical, both because in the public sector where the machinery is in the hands of the Government in power, the necessity of revising the targets is felt even within a period of two years, and also because in the private sector the attainment of the targets is dependent upon factors which the Government *ex hypothesi* cannot adequately control.

1 China presents a problem similar to that of India. "In China the density of the rural population is extremely high in many regions: surveys of 17,000 farms in twelve provinces reveal a farm population of 1,500 persons per square mile, or half an acre of land for each person on farms. Thus the average density in these regions is twice as high as in India, but average crop yields are also twice as high." ("Land Reform" U.N.O. 1951, p. 7).

2 Thirumalai, op. cit., p. 258.

There is another considertion that needs to be remembered in evaluating the Plan and its targets of production. Price control and price stabilisation are essential for the attainment of the objectives of the Plan. With a capitalist economic order, and agriculture and industries in the private sector, one of the stimuli to increased production is the prospect of obtaining higher prices by the cultivators and by the industrialists. But increased production leads to gluts and a fall in prices which affect especially the cultivators. The fixing of minimum and maximum prices in even a few staple essential commodities would involve storage facilities and subsidies, a charge on Government resources far beyond its capacity, and can only be feasible with the abandonment of a capitalist order, a closed economy and state control almost all-embracing in character. The difficulties become almost insuperable in a country where agricultural production is dependent upon the uncertain and incalculable conditions of climate and weather. High prices to stimulate production and keeping down the cost of living for improving standards of nutrition do not easily admit of being reconciled. Every attempt, moreover, at consolidation of holdings, and at mechanised methods of agriculture, is likely to aggravate the problem of unemployment or under-employment in agriculture. Redistribution of the lands belonging to Zamindars will only touch the fringe of the problem. If chemical fertilisers are to be used for improved agriculture, the poverty of the cultivating classes will prevent them from their use. Much has been made of the great irrigation projects which the plan hopes to implement even in the first five year period. But already there are signs that the cultivator may find the charges for the use of canal water beyond his reach.

The only class of agriculturists who will benefit by the use of canal waters will be the comparatively small but richer class. The large majority already under the load of a heavy debt will be unaffected by the benefits of irrigation schemes. And finally the growth of the population at an accelerated rate of which there is evidence during the last twenty years will outrun the increase in food production—a contingency which even the Plan recognises by its rather lukewarm stress on the necessity of family planning.

It must be remembered, however, that the problem of agriculture cannot be solved by agricultural policy alone. The economic life of any nation is an organic whole, and there can be no large-scale healthy development of agriculture unless it is

correlated to the development of non-agricultural industries of all kinds. Both in turn are dependent on a well-planned and well-organised banking and currency system as well as efficient transport and communication facilities. In a correct perspective, the economic life of the country as a whole must be correlated with a regenerated body of social and cultural institutions, and a new outlook on life.

No agrarian reform in India has any likelihood of success unless the question of agricultural indebtedness is settled and the Indian farmer gets a chance of working on a clean slate. We have now in our midst a nationalised Central Bank, having a hold over our capital and credit market, the custodian of our national resources and credit. The primary charge on our national resources should be the claims of our agriculture with its 250 million dependants. Under section 54 of the Reserve Bank Act, an Agricultural Credit Department has already been functioning dealing with the many-sided problems of rural credit. We have also the beginning of a mechanism through which the Reserve Bank can make credit available to the country. We have the Central Co-operative Banks which are linked up in turn with the Provincial and District Co-operative Banks, and in the final resort, to village and lending agencies.

How is the question of indebtedness to be solved? Even if a policy of complete repudiation or cancellation of all debt were to be adopted by our government in the general interest of the agricultural classes, a policy familiar to the ancient Greeks and Romans, and not unreasonably held to be sound, it would not be an unmitigated hardship for that small and much abused class of money-lenders, who have mostly safeguarded their loans on the assumption that what they lent would never be returned to them. But as this is ruled out as too drastic a measure even for our national government, with the Constitution guaranteeing the sacred rights of private property, alternative methods of dealing with the agricultural debt are suggested. Debt conciliation boards are already working in a number of States, scaling down the debts by mutual consent to figures ranging from 50 to 30 per cent of the original claim. Scaling down of the nominal agricultural debt which stands today at 900 crores to 25 per cent of its face value, for the purpose of settlement would not create such radical dissatisfaction among the creditor classes as to threaten the foundation of an orga-

nised society.[1] It has been urged as an objection against such a drastic process that it tends to deprive the peasant of credit, "to make it difficult for the enterprising to obtain capital to develop their land, and easy for the inefficient to remain on it and to undermine the moral sense of obligation which makes a man pay his dues and repay his loans."[2] All such objections rest upon the fundamental assumption of the perpetuation of the capitalist order working on the *laissez faire* postulate. But even assuming such an order, we doubt if the scaling down of debts would bring about a radical alteration in the character of the cultivating classes accustomed to observe the sanctity of contracts from generation to generation.

The debts, when they are thus scaled down, can be paid off through Land Mortgage Banks financed ultimately by the Reserve Bank, and made repayable by the cultivators in easy instalments spread over a number of years. If the total amount of credit thus made available is roughly 200 to 250 crores of rupees, such an amount is quite within the actual credit resources of the Reserve Bank of India. With the nationalised Reserve Bank, today, there need not be any difficulty in the way. But the burden need not be thrown entirely on the Reserve Bank. After the debts have been scaled down by Debt Conciliation Boards, the liabilities of the agriculturists could be taken over by Land Mortgage Banks, who could recover the amount from the debtors by instalments spread over a number of years.

But this is only the beginning of a huge task that will face the responsible leaders of our government. If this country is to enter upon agricultural production by mechanised methods and the use of scientific appliances, it is obvious that the seeds, the implements, the fertilisers will have to be supplied by the State, as also the propaganda and the educational machinery for familiarising the cultivating classes with the new methods and the new appliances. Plots and properties that are too small will have to be brought together in collective farming for the

1 The People's Plan made a similar suggestion for reducing the present debt to 25 p.c. and proposed that the State should undertake the liability of repayment by issuing self-liquidating bonds of 40 years at the rate of 3 per cent interest. The Bombay Plan, on the other hand, ignored the gravity of the debt problem and had no solution to offer except the usual tinkering method of helping the ryot through co-operative societies. It is also worth noticing that the Planning Commission do not make even a passing reference to the problem in the Five Year Plan, as if the problem does not exist. We do not think they were so naive as to believe that ignoring a problem is the best method of solving it. The ever present and increasing burden of agricultural debt will always present a serious barrier in the way of agrarian reform.

2 Presidential address by Sir M. L. Darling, Proceedings of the First Conference, The Indian Society of Agricultural Economics, 1940, p. 12.

effective pooling of resources and implements. The present day rigid practice of collecting the land assessment will have to be replaced by a system in greater daily touch with the farming population, which will take from them a part of what they have actually produced, leaving them a reasonable margin for a comfortable living. The principles of co-operative farming which we are here envisaging will not be entirely unrelated to the past. If the village community in India was already an economic unit aiming at self-subsistence, and based upon a sense of co-operation and corporate life, the principles of collective farming on a co-operative basis with State credit to make up all the deficiencies of private enterprise, admit of being easily grafted upon these old world economic institutions.

Russia at the time of the Revolution of 1917 was likewise a land of small farmers sunk in poverty with a heavy load of debt. They were not far from being serfs attached to the soil. Within a period of 15 to 20 years the whole agricultural outlook in the country was changed. The peasants were induced to pool their lands, their livestock and their implements. Partly under pressure, partly by propaganda, partly by economic inducements, more than half of the entire peasant households of the Soviet Union were organised in collective farms, and over 70 per cent of the total cultivated area was brought under State and collective farms. If this could be achieved in Russia, and we are told it was achieved, with a peasant population as illiterate and depressed as the cultivating millions of India, a similar transformation of our agriculture from the old world methods to modern scientific farming on a co-operative and planned basis, backed by State aid and control, is not beyond the limits of practicability. Such radical transformation of our agriculture would involve the complete disappearance of parasitic landlordism and the consequent redistribution of land.

It has to be borne in mind, moreover, that the total area of land held by the zamindars at the top of the social pyramid is not large enough to meet the needs of the small holders and landless labourers at the bottom. Moreover, more redistribution of land ownership will not by itself enlarge the unit of cultivation and remove one of the vital defects of our agricultural structure. Nor would it offer land or greater employment to the majority of the landless labourers. No reform of this character will affect the unfavourable man-land ratio in the country.

Land reform does not end with changes in land tenure, but has to be regarded as a continuing process. The problem is not so much economic and technical as educational. Education has to reform the man, and through him the land. "It has to free the man from self-centred isolation and raise him to a level where the operation of his holding in active co-operation with other farmers is a matter of course, and agricultural co-operation the natural consequence."[1]

Nothing seems clearer to us than that our agricultural problems can never be solved by private initiative and efforts and along the traditional lines of *laissez faire* tinkering. These problems represent the crystallised results of the accumulated neglect and blunders of generations. Some of them are the products of institutional forces. To shake our agriculture free from the trammels of the past requires the corporate wisdom and resources of the body politic, resolutely bent on achieving its end, even at the cost of shaking the foundations of social stability.

We have hitherto assumed the feasibility of a planned agricultural development working on a clean slate and backed by the total resources which the nation can make available in the shape of men and materials. Perhaps we are over-simplifying the nature of the problem and our diagnosis of the character of the disease. We have already pointed out, that underlying all the defects of our present agricultural organisation, there may be deeper and more far reaching causes than the indifference of our alien rulers in the past and the conservatism and thriftlessness of the agricultural population. Briefly the Indian farmer, whose agriculture was hitherto of the subsistence type of production, has been forced in a period of less than a century into a wider circle of exchange. Economic changes have led him to grow food or non-food crops on his farm, irrespective of the capacity of the farm, and its suitability for the growth of the crop. A subsistence type of agriculture cannot be readily adjusted under conditions of private enterprise to the efficiency and specialisation of agricultural production such as are characteristic of the U.S.A. and Canada. It is this subsistence type of agriculture that has been dragged into the international market under the British rule, into growing cotton and wheat, linseed and groundnuts, for creating an export surplus to offset her payments for imports of services and cheap manufactured goods.

1 "Inter-Relationship between Agrarian Reform and Agricultural Development." (F. A. O. Rome, 1953), p. 44.

Even if the problem that faces us today in India is, as it is often said to be, the problem of equating a subsistence type of production with the new competitive conditions in a world market which her agricultural production has to face, an easy optimism such as the Planning Commission display cannot take us very far. The Planning Commission say, let us lay down targets of production, let us assume that from year to year the half-starved masses will tighten their belts and save, let us further assume that their enthusiasm will be aroused to co-operate with the administration, an administration whose canons of integrity leave much to be deserved, and finally let us assume that our industrialists will suddenly be converted from exploiters and profiteers into disinterested servants of the nation—and we shall accomplish what we are aiming at. With the faith of the author of the first chapter of Genesis the Commission say, "Let unemployment cease, and our production increased!" and lo, unemployment vanishes and production attains the expected targets!

Leaving aside such easy methods of dealing with our problem, we ask ourselves what a large-scale radical planning would be able to accomplish. Even the Agricultural Commission felt inspired at one stage to suggest: "If the inertia of centuries is to be overcome, it is essential that all the resources at the disposal of the State should be brought to bear on the problem of rural uplift." The problem of improvement of agricultural production in India is not a purely technological problem. It is primarily an economic and social problem. Technological possibilities in the circumstances in which we find ourselves can only be translated into actualities through a planned reconstruction of our socio-economic structure. This was recognised in Dr. Burn's report when he observed that "if at the moment we are not prepared to accept the implication that modern technological methods demand the increase in size of productive units, we must at least admit that technological improvements are impossible without at least collective action by aggregations of units."[1] He ended up his report by saying that, in any planning of agriculture for the future, one inevitably turned to the great Soviet experiment; he quoted Sir Daniel Hall, a well-known British agricultural scientist, who stated that plan ning of the Soviet organisation was done by men of wide material knowledge of the world and a wide experience of agriculture.

1 Report, p. 120.

Apart from this admission of the necessity for a planned agricultural development for the uplift of the masses, history has long since offered evidence of the failure of private enterprise in solving agricultural problems. In England, a farmer's output of milk or potatoes has been limited. He is encouraged to produce wheat and sugar beet. In the U.S.A., he is encouraged not to produce wheat under the threat of withholding subsidies. For 1954, wheat acreage has been cut by 20 per cent. To counter the tendency of farmers to withdraw the marginal land out of cultivation and cultivate the rest more intensely, it has been suggested that the quantity of wheat per acre that each farmer can market should be limited.[1] Even where there is no control, the farmer is not free to grow what he thinks best. The small farmer in the U.S.A., farming on borrowed money, has to grow crops that his creditors approve. The local bank manager would want the crop to be one that would sell; the store keeper would not favour the growth of food for the farmer's own consumption. The choice does not lie between control and the absence of control. It lies between control by a central body for the good of the whole community and control by a variety of smaller bodies with limited and conflicting interests. Private enterprise in agriculture has been attended with waste and inefficiency. But are we sure that the sporadic planning or lack of planning involved in the present system is worse than planning by the States?

Planning for agriculture would require, in the first place a careful ascertainment of the food requirements of our population on the basis of a balanced diet. Such calculation should take into account the growing quantities demanded by a growing population within the next ten or twenty years. In the second place, there would have to be regional allocation of different varieties of food crops suited to the character and constituents of the soil. Such planning, if it is to be successful, must be on an all-India basis in which questions of State autonomy and intra-State differences should never be allowed to interfere with the larger interests of the population of the country as a whole. This is all the more important in the light of our experience during the last few years. With the demand for linguistic States and pursuit of independent economic policies in the States, the food problem is hardly susceptible of any solution except on an all-India basis. In the third place the

1 *The Economist*, June 12, 1954, p. 910.

organisation of village co-operative societies in every village might be the appropriate machinery through which the farmer can get the seeds and fertilisers and implements necessary for raising the crop assigned to this land under proper advice.[1] There is need for agricultural extension or advisory services on a large scale, supplying information about methods and technique to the cultivator for improving production and raising the standard of living of farmers.[2]

The village co-operative society may not be confined in its activities to the supply of cheap credit under private initiative. Its activities may extend to co-operative production linking the small farmers into the einjoyment of the benefits of large-scale farming by mechanised methods. These co-operative societies, which we have in mind, are not to be the product of private enterprise, helped by private resources, but the creation and agents of the Government, working with capital made available by the Reserve Bank, with their personnel in daily touch with the agricultural population, helping and guiding and stimulating at every turn.

In this connection, it is necessary once again to reiterate that planning for agriculture has to be linked up with planning for village industries and handicrafts to reduce the number of people entirely dependent upon agriculture. For, in the context of an unfavourable ratio of land to people all the agrarian reform measures can, at the most, bring a temporary easing of the situation rather than a final solution of the agricultural problem.

The problem of agriculture in India, much as in other countries can never stand by itself and can never be solved unless the planning that we are considering is taken as an organic part of a wider planning that extends its activities to all the aspects not only of our economic life but even of our social life and cultural ideals. The planning of agricultural production must be correlated to a planning of industrial production, and these two again can be successful only if they rest upon the

1 It must not be forgotten that the poverty of the farmer stands in the way of his benefiting by supply of seeds and fertilisers, unless these are distributed to him as free gifts or at a nominal charge.

2 See "Impact of Agricultural Extension Services in European Countries" F.A.O., 1954. cf. "The organisation of Extension Services with the object of securing increased production and raising the standard of village life is a new undertaking. Extension is a continuous process designed to make the rural people aware of their problems and indicating to them ways and means by which they can solve tnem. It thus involves not only education of the rural people in determining their problems and the methods of solving them, but also inspiring them towards positive action in doing so." First Five Years Plan, p. 232.

foundation of a planned currency and credit organisation. Production in turn must be correlated to distribution, with the abolition of glaring inequalities and the dissemination of the productive resources of the nation amongst the mass of the population with a view to bringing within the reach of all the conditions of a comfortable existence.

In the last resort, our agricultural problem, is a problem of population growth in relation to land. We are faced with a number of dilemmas and paradoxes in all our efforts to face the problem. In a country like ours with over-populated areas where alternative employment possibilities are not available and where no less than 80 million people are regarded as surplus on the land, any attempt at the introduction of machinery for increasing the production from land will increase unemployment, and may prove a factor of greater instability and unrest than before. If, turning in another direction, we endeavour, for the sake of securing social justice, to redistribute land by the abolition of Zamindaris, we may reduce our agricultural output by splitting up of estates into smaller units. "Reform measures determined primarily by political expediency, or propaganda, will hardly ever have favourable permanent effects on agricultural production, even though they may temporarily improve the general social conditions."[1] "No agrarian reform can remedy a structure due to the fact that too many cultivators are trying to get a living from too little land."[2] The Planning Commission aiming both at increased production and social justice work out its elaborate though not ambitious, targets of production on the implicit assumption that the two objectives are reconcilable. Similarly the attempt to convert pasture land or hitherto uncultivated land into cultivated land limits the extent of grazing grounds and accelerates the process of soil erosion and deprives the soil of the organic manure so urgently needed for preserving soil fertility. The enormous number of feeble and decrepit cattle who linger on the already depleted pasture lands constitute an additional burden on the soil which is unable to provide adequate food to the human beings dependent on it.

A balanced system of farming, such as prevails in Europe and America, is difficult to obtain in a country like India, with its social and religious taboos which involve the preservation

1 "Inter-relationship between Agrarian Reform and Agricultural Development," op. cit. p. 34.

2 *Ibid*, p. 35.

of old and decrepit cattle. We have, therefore, to be content with a wide spread practice of monoculture. Farming can only mean plant production in India. The fertility of the land is declining, farm yard manure is insufficient, rains in torrents wear away the ground; the winds carry away with them the upper layer of fertile soil; if irrigation is resorted to, and the floods canalised, the water supplied to the farmers is at a cost beyond their means of paying for, except the few who are rich. Irrigation also involves the use of fertilisers which the poor cultivator cannot purchase. The Plan instead of concentrating on the development of well and tank irrigation resorts to gigantic schemes of major irrigation works. And so, to avoid more harm than good, the slow moving Indian farmer must jog along with his wooden ploughs and harrows drawn at a crawling pace by lumbering oxen!

APPENDIX

THE STATE AND AGRICULTURE

Even in the days of the East India Company, increasing interest was taken in the possibilities of improving Indian agriculture. As in the matter of banking and currency, so in the sphere of agriculture, it was assumed that methods which had been attended by success in Great Britain would also succeed in India. Thus in 1839, the East India Company requisitioned the services of 12 American cotton planters to show how cotton should be grown in India. In 1864, similarly, the Madras Government imported "steam ploughs and a battery of implements" to teach Indian cultivators how to cultivate the soil.[1] On the conclusion of the work of the Bengal and Orissa Famine Commission in 1866, Government began to consider the desirability for a general policy in agriculture by the institution of a special department. It was not till 1871, however, that the first Agricultural Department was created "to take cognisance of all matters affecting the practical improvement and development of the agricultural resources of the country."[2] It is interesting to find, as the Royal Commission on Agriculture pointed out, that the institution of a separate department of agriculture in each province was the result of the interest taken by the Manchester Cotton Supply Association in the improvement of cotton in India, a crop in which it was primarily interested.[3]

1 Sir John Russell's Report, p. 1.
2 Quoted in Voelcker's Report, p. 1.
3 Agricultural Commission Rtport, p. 15.

A Department of Revenue, Agriculture and Commerce of the Government of India began to function in 1871, and continued to do so until 1879, when the Department was reabsorbed in the Home Department. In 1880, the Famine Commission stressed the necessity of establishing Agricultural Departments under a Director in each province. Agricultural enquiry, the collection of agricultural information with a view to inform the authorities about the approach of famine, agricultural improvement with a view to the prevention of famine in future, and famine relief were laid down as the duties of the new departments. Accordingly in 1882 Provincial Departments of Agriculture were instituted. These Departments were made Departments of Land, Records and Agriculture, for compiling and collating the agricultural facts and statistics of every village. A new Imperial Department of Agriculture was also created with Sir Edward Buck as secretary. Such were the beginnings of agricultural policy. Agricultural science was in a very backward state in England at that time. The only science which had made any progress was agricultural chemistry. Proposals for the recruitment of an agricultural staff were confined to chemists. In 1889 Dr. Voelcker was sent out to advise as to the best way of applying agricultural chemistry to Indian agriculture. He toured all over India and made his well-known report on the Improvement of Indian Agriculture. He maintained that Indian agriculture was far from being primitive and backward, that in many parts of the country there was little or nothing that could be improved, and that where agriculture was manifestly inferior, it was more the result of the absence of facilities which exist in the better districts than of a bad system of cultivation. He recommended the systematic prosecution of agricultural enquiry and the spread of education, and laid down in detail the lines on which agricultural improvement was possible. The Royal Commission on Agriculture observed thirty-five years after Dr. Voelcker's report that his book was still of the utmost value to all students of agriculture in India.

In the meanwhile, sugarcane diseases caused heavy loss to cultivators in Madras. In 1898 Dr. Barber was brought to Madras where he achieved remarkable success by selecting disease resistant varieties. The Famine Commission of 1901 recommended the appointment of experts in the Agricultural Departments of all provinces, capable of applying scientific methods to the improvement of agriculture. In 1901, an Imperial Mycologist and an Imperial Entomologist were added. The Agricultural Depart-

ment was reorganised in 1905 under Lord Curzon. A central research institute was instituted at Pusa with an agricultural farm and an agricultural college. Provincial research institutes and experimental farms were also established in each important agricultural tract. A sum of Rs. 20 lakh was made available by the Central Government for the improvement of agriculture.

Imperial (now Indian) Council of Agricultural Research

The Government of India Act of 1919 put upon the Provincial Departments of Agriculture the main responsibility for agricultural development, and reserved to the Central Government the right to promote research and the power to deal with animal and plant diseases. The Imperial Agricultural Research Institute at Pusa received through Lord Curzon a donation of £30,000 from Mr. Henry Phipps of Chicago. In addition, livestock work was carried on by the Imperial Institute of Animal Husbandry and Dairying, the Imperial Cattle Breeding Farm at Karnal, and the Creamery at Anand. An Imperial Sugar Breeding Station was established at Coimbatore as a branch of the Pusa Institute. Finally, the Imperial Institute of Veterinary Research at Mukteswar, started on a modest scale in 1893 now manufactures protective sera and vaccines. The Royal Commission on Agriculture issued its report in 1928 and made comprehensive recommendations. It was followed by the establishment of an Imperial Council of Agricultural Research, whose duty was to give the lead and, co-ordinate wherever it was necessary, but not to intervene in Departmental affairs. It made grants for approved investigations. Its work was to be periodically reviewed by a disinterested expert; the first to be chosen for this work was Sir John Russell who made his report in 1937. Dr. Stewart reported on some aspects of its work in 1946.

The central organisation of the Imperial Council was divided into two parts, a Governing Body which would have the management of all the affairs and funds of the Council, and an Advisory Board, the functions of which would be to examine all proposals in connection with the scientific objects of the Council which might be submitted to the Governing Body. An initial grant of Rs. 25 lakhs supplemented by an annual grant of Rs. 7.25 lakhs was provided from the funds of the Central Government. Donations were also made by some of the Indian States; and an Act of 1940 levied a cess of ½ per cent *ad valorem* on certain agricultural commodities, with a view to securing a larger stable income for the Council.

During the Great Depression of 1929, unlike other countries of the world, the Government of India did not take any steps to help the ryots who were hit hard by the precipitate fall in agricultural prices. Government remained wedded to their traditional *laissez faire* policy. They argued that, as the world depression was the result of world causes, any action taken by them would not help the situation at all.

Sir John Russell reviewing the work of the Council made comprehensive recommendations. The Council should hand over to the Universities investigations of a scientific nature, and make a grant to the Universities for this purpose. The Council should stimulate extension work by the Departments and commercial exploitation of useful discoveries. Investigations on food crops should be made in conjunction with nutrition experts. A survey showing the quantities of food produced in the various provinces should be made so as to provide a basis for joint action by agriculturists and nutrition experts in improving the schemes of food production in the villages.

The functions of the Council, regarding promoting, guiding and co-ordinating research were masked to some extent by the growth of research by other organisations over whose research projects it had imperfect control, e.g., the States, the Commodity Committees and Central Research Institutes. A number of Commodity Committees were established between 1921 and 1949, for cotton, jute, tobacco, sugarcane and other commercial crops, with representatives of all interests concerned, like growers, traders, processors, etc., with the function of advancing research in their respective fields. Some Committees have done good work, but exclusive attention to the problems of a single crop led to neglect of the problems of other crops in the same region. Such crop-wise compartmental research was discouraged by Dr. Stewart in 1946. He was of the opinion that the functions of Commodity Committees should be confined to problems which arise after the growth of the crops, e.g., processing, marketing, etc. Agricultural research must comprise all crops grown in a soil in the interest of all-round agricultural development. "We must start with the soil, and consider it in relation to all the crops which it is asked to grow, rather than starting from the opposite direction involved in the widely accepted policy of sectionalising research into a series of crop compartments." Another defect is earmarking of funds in respect of particular crops which prevents a balanced allotment of finances according to needs of different crops. Thus

relatively much more work has been done on crops under Commodity Committees than on crops like millets, wheat and rice which are of great national importance.[1] It is significant that Commodity Committees are mainly confined to cash crops. Later on, all-India Research Institutes for rice at Cuttack and potatoes at Patna were established.

Among other central research institutes may be mentioned the Indian Agricultural Research Institute at Delhi. It carries on fundamental research.

The Council was renamed Indian Council of Agricultural Research after Independence, and was completely reorganised in 1951 to enable it to discharge its responsibilities more effectively, specially in the field of extension. Its governing body is composed of the State Ministers of Agriculture and representatives of Parliament and commercial interests. It is assisted by a Board of Research consisting of experts representing the States, Universities and scientific bodies and a Board of Exension in evolving integrated programmes of work in these two major spheres. A Standing Committee has also been set up which would enforce the policy laid down. The Council correlates research work at different centres in the country, suggests programmes of research, gives financial help for approved schemes and undertakes other schemes of its own.

The Council has sponsored more than 300 schemes, and a sum of about Rs. 40 lakhs was ear-marked for new schemes as well as for the extension of certain old schemes in 1952-53. Important among these schemes is the one relating to the Japanese method of rice cultivation, tried out successfully in Bombay State. The Council has now arranged for planned experiments at Government farms in different parts of the country, so that the economics of this system *vis-a-vis* the method of cultivation prevalent in the country can be worked out. The Council has also set up an Indian Council of Agricultural Education to remedy the existing defects in agricultural education. The Planning Commission recommend the setting up of a high level committee to examine the whole question of the organisation of agricultural research in India.

As they are now organised, the Agricultural Departments are equipped for bringing the results of the application of science to agriculture into the villages. There are the agricultural colleges and research institutes at one end. At the other end are the vil-

1 First Five Year Plan, p. 270.

lage demonstration plots, where the effects of improved seeds, methods, implements and manures are shown under the cultivator's own conditions. There are also experimental farms, seed farms and seed stores.

Under the stress of the Second World War, the Government was compelled to take more active interest in agriculture, especially food production, and instituted various kinds of controls, rationing of food supplies and a definite procurement policy. The Grow More Food campaign was initiated in 1943, and during the first four years grants and loans were given by the Centre to the States to enable them to increase production. Government also appointed a number of committees to examine and report on various aspects of agriculture. The advent of Independence in August 1947 brought about a radical change in Government policy, aiming at solving the food problem and rationalising the agricultural economy. Experts like Lord Boyd Orr were invited to study and advise Government. The Grow More Food Campaign was remoulded during 1951-52, with a view to make its scope intensive rather than extensive. A number of river valley projects were started by the British Government and these have been included in the First Five-Year Plan. At present, there are 153 projects under execution, 6 being multi-purpose, 104 irrigation and 43 power projects (12 projects are major projects). An integrated production programme was formulated in 1950-51 for the establishment of relative self-sufficiency in food, cotton, jute and sugar, now a part of the Five-Year Pian and integrated into the Ten-Year programme of Land Transformation. The Central Food Technological Institute was established in October, 1950.[1]

A Technical Co-operation Agreement was signed between India and the U.S.A. in January 1952. It provides for the creation of an Indian Central Committee to develop "programmes of economic development and technical co-operation in which the assistance provided by the Government of the U.S.A. can be most advantageously utilised." The Planning Commission is now the Central Committee contemplated under the Agreement, and the Director of T.C.A. in India assisted by a team of U.S. advisers acts as a consultant. The Agreement provided for the appropriation by June 1952, of $50 million and this amount supplemented by an Indian contribution of Rs 41 crores ($86 million) is to finance eleven projects, of which the central project provides for community development.

1 For details see "Towards Land Transformation, Evolution of Agricultural Policy," published by the Ministry of Food and Agriculture, Government of India, 1951.

We give below a brief account of the community projects:—

Community Projects

Among the schemes recently planned and organised has to be included community projects initiated by the Central Government in 1952, for the purpose of transforming the social and economic life of the villages. The Community Project area is usually divided into three blocks, each consisting of about 100 villages and a population of 60,000 to 70,000. Each of these Development blocks is in turn divided into groups of 5 villages each, each group being under the supervision of a village level worker. Initially 55 projects are planned, covering an area of about 27,000 square miles in 18,464 villages with a population of roughly 16 millions. The areas selected are areas under irrigation or assured rainfall. Seven areas have been located amongst scheduled tribes. The main lines of activity in a Community Project are agriculture, irrigation, roads, education, health, housing, training and social welfare. At the Centre there is an Administrator of Community Projects, a Development Committee for every State, with a Commissioner as Secretary, a Development Officer for the district, and in the villages an Executive Officer with 125 village level workers. The workers of the Bharat Sevak Samaj are used for mobilising volunteers and ensuring popular support. The estimated cost of a rural Community Project is Rs. 65 lakhs over a period of three years. The Central Committee have, however, cut down the costs to Rs. 45 lakhs. The cost is shared between the Centre and the States in the ratio of 75 to 25 for non-recurring expenditure and half and half for recurring expenditure. The States are to be made responsible for the entire expenditure at the end of three years. The Five Year Plan makes a provision of Rs. 100 crores for Community Projects and Rural Development.

The Ford Foundation, in this connection, has made a grant of Rs. 2.30 crores towards community development and extension work. Extension work is restricted in scope but will cover a wider region including 120,000 villages, 70,000 of these will receive intensive development, while the remaining 50,000 villages, with a population of 33 million will come under the National Extension Service. Under the National Extension Service programme 85,000 men would be drafted as project officers, agricultural graduates, multi-purpose village level workers, veterinary doctors, co-operative inspectors, school teachers, doctors, compounders, midwives, engineers and mechanics. 34 training centres in different parts of the country are already training multi-purpose village

level workers. The main objective of the scheme is to create necessary leaders for agricultural reconstruction.

It has been pointed out that this community development project suffers from two limitations. Like many other movements instead of starting from the bottom, tapping local resources in the shape of local enthusiasm and local agencies, including human and institutional, it has been sponsored from the top, multiplying and creating new agencies instead of using existing agencies. The other limitation arises from the lack of trained personnel having intimate associations with local conditions.

To meet the needs of administrative machinery at the village level increasing attention is being given to the revival of village Panchayats, which virtually disappeared under the centralised administrative system of British Rule. As long ago as 1909 the Decentralisation Commission observed: "the scant success of the efforts hitherto made to introduce a system of rural self-government is largely due to the fact that we have not built from the bottom—the foundation of any stable edifice which shall associate the people known to one another and have interests which converge at well-organised subjects." The Commission recommended the constitution of village Panchayats. After the attainment of Independence, the Directive Principles of State Policy lay down that "the State shall take steps to organise village Panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government." Since then, almost all the States have enacted legislation to constitute Panchayats. In Bombay, Madras and some other States Panchayats are set up either elected or nominated, with varying membership from 3 to 15, (30 to 51 in U.P.). They have powers to manage public buildings, and look after education, recreation and social and moral welfare of the people. In the economic sphere they are vested with powers to control pests, improve livestock, construct and supervise minor irrigation works. Among other duties entrusted to them are regulation of markets in the village, regulation of weights and measures, establishment of granaries, seed stores and agricultural implements, and collection of statistics in respect of the village. For discharging these functions the Panchayats are authorised to levy taxes, such as profession taxes, tax on shops, octroi duties, etc. In Bombay, Government is required to give a percentage of land revenue collected by them in the village.

Agriculture and the State in the West

In the West, acting on the assumption that agriculture has to be carried on with a view to capturing markets at home or abroad, during the last sixty years, there has been a marked tendency for the State to take an increasing share in the introduction and financing of all possible measures for the development and improvement of agriculture. Even a hundred years ago, the Governments of many European countries undertook the introduction of new crops like sugar-beet and leguminous plants. The desire for self-sufficiency led Germany and Italy to introduce flax and cotton, and the U.S.S.R. to cultivate various species of plants for the production of rubber. In a number of countries specially the U.S.S.R. and Italy, the improvement of plants is entirely in the hands of the State, which compares and selects improved varieties, tests their qualities, and distributes the information to the cultivators. The work in this connection has started with research and experiments, supplemented by a properly organised inspection service, responsible for supervising the condition of crops and testing plants. In the next place, agriculturists are kept informed of technical progress by propaganda and popularisation of knowledge. The countries which have acted in accordance with these principles are now at the head of the agricultural movement.[1]

It has also been recognised that the future of agriculture largely depends on research and progress in the fertiliser industry. New methods of manufacturing nitrogen have been invented. Deposits of potash in Russia, Spain, France and the U.S.A. have been largely exploited. The use of complex, complete mineral fertilisers is being increasingly resorted to in the U.S.A. As the outcome of research and practical tests, there is a general increase in the use of superorganic nitrophosphates prepared out of many forms of vegetable waste from the main crops.

In Europe, during the present century, the State has assumed the initiative and has met the larger proportion of the costs of land reclamation and improvement. In many European countries, intensity of cultivation having reached the limits set by present day technique, the State has taken a leading part in winning new areas for cultivation and in increasing the fertility of those already under cultivation. In Italy, even as late as 1920, there were parts of the country which were infertile, marshy and depopulated, some of them, lands lying below sea level, and exposed to inundations of varying durations. One of the largest of these marshland

1 "Conditions and Improvement of Crop Production, Stock Raising and Rural Industries." Geneva, 1939, pp. 15-16 (European Conference on Rural Life).

areas is the Pontine Marshes. The Law of December, 1928, followed by the Decrees-Royal of February, 1933 provided for re-afforestation, correction of the upper courses of mountain streams, reconditioning of slopes by means of meadows, draining of these slopes, reclamation of lakes and of marshes, supply of drinking water to rural population, distribution of electrical power for agricultural purposes, construction of communications and consolidation of holdings. On the 1st July, 1938, the total area on which reclamation works were, or were being carried out amounted to 5,700,000 hectares. The expenditure over the period 1922-38 amounted to 6,579,000 lire. To this must be added 4,413,000,000 lire which the State disbursed in the form of subsidies for land improvements carried out by private persons. The transformation of lands resulted in a rise in their values as may be seen from the following figures referring to reclaimed zones in Venetia:—[1]

Zone	Land Value Before	Lire per hectare New Value	Increase in Original value (100)
Middle Adige ..	5,000	16,000	320
Delta of the Brenta ..	2,500	10,500	420
Lower Ongaro I ..	2,500	13,000	520
Lower Ongaro II ..	2,500	13,000	520
Mouth of the Brenta-Adige	2,200	10,000	455

When we consider these unceasing efforts made for the improvement of the conditions of agriculture and reclamation of land, we cannot help contrasting the immensity of the work that lies ahead of us in India, and the miserably limited character of our own achievements. The possibilities of land reclamation in India may be judged from the fact that 59,000,0000 acres are classified as current fallow from year to year, and 100,000,000 acres as uncultivated land which could be cultivated. There is another item of 103,000,000 acres which is classified as not available for cultivation—that is nearly 17 per cent of the total land area of India.[2] Taking the European countries, apart from Norway and Sweden and mountainous countries like Greece, Switzerland and Roumania, the rest of the countries show an average of ten per cent of land incapable of cultivation. Even a country like Finland shows 82 per cent of its total area as capable of cultiva-

1 "Land Reclamation and Improvement in Europe." Geneva, 1939, p. 33 *et seq.* (European Conference on Rural Life.)

2 Our Government has reclaimed 5.9 lakh acres between 1948-49 and 1951-52 with the help of the Central Tractor Organisation established in 1947 to carry out land reclamation operations.

tion.[1] Here is a problem which offers a challenge to the willingness and capacity of our Government. The slow increase in the total production of food and the low production of our soil involve a danger to the nation's future. Shall our Government be able to meet this challenge?

CHAPTER XVIII

GROWTH OF INDUSTRIES

Indian Industries in the Past

"At a time when the rest of Europe, the birth place of the modern industrial system, was inhabited by uncivilised tribes, India was famous for the wealth of the rulers and for the high artistic skill of her craftsmen," so begins the Report of the Indian Industrial Commission, presided over by Sir Thomas Holland, 1916-18. "Even at a much later period, when traders from the West made their first appearance in India, the industrial development of this country was at any rate not inferior to that of the more advanced European nations." Cotton spinning and weaving were familiar as domestic employments as early as the Mohen-jo-daro civilisation. The muslins of Dacca were known to the ancient Greeks. India has been regarded legitimately as the mother country of the cotton industry. The iron industry was developed to an extent that enabled the country to export its finished products to other countries. Bernier and Tavernier in the days of the Moghul rule bear witness to the large streaked silks, tufts of gold turbans, silver and gold cloth, brocades, satins and minute carvings in wood and ivory. The textile industries supplied the needs of the common folk and so did the arts and crafts like those of the blacksmith and the carpenter supply the local needs of the village. Besides these industries, undoubtedly on a small-scale as in all countries at the time, there were also highly specialised arts and crafts in the towns which catered to special classes of customers, the more well-to-do classes and the royal families. Such were the brassware industry in Benares, the shawl industry of Kashmere and the silk industry of Murshidabad. There was also a considerable foreign trade in steel and silk and cotton fabrics, carried across the oceans in our own ships.

If we turn from the village economy of India to its urban

1 "Population and Agriculture," Geneva, 1939, p. 12 (European Conference on Rural Life).

life in the Moghul times, the same impression is reinforced. "The courts of Indian Rulers had always attracted to themselves the surplus grain of the country side to feed the armies, officers and dependants of the Chief. These and the traders and the artificers who supplied their needs made up the population of an old Indian capital. From an industrial point of view, the most interesting section of this population was the class of artisans, who were engaged in producing not only arms and leather accoutrements, but rich textile fabrics, carved stone, wood and ivory, wrought metal, jewellery and other articles of luxury, often of exquisite workmanship and high artistic value. Even today, the famous centres for production of Indian art wares are the old capital towns."[1]

The East India Company and Early British Rule

After the decline of Venice and Genoa, the Portuguese and the Dutch captured the trade with India, and in 1600, the East India Company obtained a charter from Queen Elizabeth to trade with the East Indies, "not to exchange as far as possible the manufactured goods of England for the products of India but to carry the manufactures and commodities of India to Europe." "At the end of the 17th century great quantities of cheap and graceful Indian calicoes, muslins and chintzes were imported into England and they found such favour that the woollen and silk manufacturers were seriously alarmed. Acts of Parliament were passed in 1700 and 1721 absolutely prohibiting with a very few specified exceptions, the employment of printed or dyed calicoes in England, either in dress or in furniture, and use of any printed or dyed goods, of which cotton formed any part."[2] By Acts 11 and 12, William III, Chapter 10 it was enacted that the wearing of wrought silk and of printed and dyed calicoes from India, Persia and China should be prohibited, and a penalty of £200 imposed on all persons having or selling the same. Similar laws were enacted under George I, II and III. Thus, during the major part of the 18th century, Indian manufactures were imported into England only in order to be sold on the Continent, but were excluded from the English market itself by law.[3]

In the meantime between 1760 and 1820, vast economic changes that are associated with what is briefly called the

1 Industrial Commission Report, pp. 2-3.
2 Lecky, "History of England in the 18th Century."
3 Marx, "The East India Company." in '*New York Daily Tribune*,' July, 11, 1853.

Industrial Revolution were brought about by the discovery of the process of smelting iron with coal, of the spinning jenny by Hargreaves, of the spinning machine by Arkwright and of the power loom worked by steam. But more potent than all these inventions, the driving force that brought about these changes, was the influx of Indian treasure which added considerably to England's cash capital. "In themselves inventions are passive. Many of the most important having lain dormant for centuries, waiting for a sufficient store of force to have accumulated to set them working. That store must always take the shape of money."[1] It was obviously the hoards of Bengal that began pouring into England after 1757 that contributed to that economic transformation of England which made it in the 19th century the pioneer of industrialism. As Brooks Adams observes: "Before the influx of the Indian treasure and the expansion of credit which followed, no force sufficient for this existed; and had Watt lived fifty years earlier, he and his invention must have perished together."[2] In the 18th century, Colonies were looked upon as plantations whose raw produce was to be utilised by the mother country for the manufacture of finished goods which could be re-exported to the Colonies and to the rest of the world. The American War of Independence put an end to this policy of economic exploitation so far as the Colonies were concerned. Africa and Australia in the 19th century were left to work out their own economic life without much interference from the mother country. But of more vital importance than these Colonies was the dependency of India, which was converted into a store house of raw materials. India became in the 19th century a plantation, "growing raw produce to be shipped by British agents in British ships, to be worked into fabrics by British skill and capital, and to be re-exported into India by British merchants to their corresponding British firms in India and elsewhere."[3]

The policy pursued by the East India Company is clearly reflected in a letter from the directors to Bengal dated 17th March, 1769: "The Company desired that the manufacture of raw silk should be encouraged in Bengal, and that of manufactured silk fabrics should be discouraged. And they also recommended that the silk winders should be forced to work in the Company's

1 Brooks Adams, "The Laws of Civilisation and Decay," p. 260.

2 *Ibid.*

3 Ranade, "Essays in Indian Economics," p. 106.

factories and prohibited from working in their own homes." In another letter written a few years later, the Directors observed, "This regulation seems to have been productive of very good effect, particularly in bringing over the winders to work in the factories. Should this practice (the winders working in their own homes), through inattention, have been suffered to take place again, it will be proper to put a stop to it, which may now be more effectively done by an absolute prohibition under severe penalties by the authority of the Government." "This letter," observed the Select Committee on the Administration of Justice in India, 1783, "contains a perfect plan of policy, both of compulsion and encouragement which must in a very considerable degree operate destructively to the manufactures of Bengal. Its effects must be to change the whole face of the industrial country, in order to render it a field for the produce of crude materials subservient to the manufactures of Great Britain."[1]

19th Century Changes in the Economic Life of India

After the opening of the Suez Canal, British manufactured goods streamed into India and other Oriental countries. England had become the workshop of the world. The technical transformation of the means of transport and communication broke down the economic isolation of all other countries. The spinners and weavers of India had to face the alternatives between gradual destruction of their industry and the adoption of the new technique. The Indian industrial workers found it increasingly difficult to keep their hold over the home market with their outmoded instruments of production.

If India was to keep pace with the new era of technical development, it was necessary that the old economic organisation should have been adjusted to the new conditions. The existing productive apparatus should have been carefully replaced by a new productive apparatus. But though the dissolution of the old organisation proceeded unhindered in the first half of the 19th century, the process of adjustment did not begin; at the same time the dissolution of the old order remained incomplete. The framework of the old order with 500,000 villages still remains. Urbanisation based on industries is still far from being achieved. The introduction of railways intensified the economic confusion. The transport system of India, instead of co-ordinating the economic life of the country, commercialis-

1 Quoted in Land Revenue Commission Report, Bengal, Vol. II, 1940, p. 324.

ing its agricultural resources and developing its industrial opportunities, grew up as an anomalous unco-ordinated system, partly the result of military considerations, partly prompted by administrative and commercial reasons. The development of railways in India served a double purpose. In the first place, it created a market in India for the manufactures of the newly developed iron and steel and engineering industries of England, and, secondly, it facilitated the carrying of raw materials from inland centres to the harbours, and of manufactured goods from the harbours to inland centres. Instead of assisting in the evolution of a sound economic life, the railways in India sank old towns into oblivion or "resurrected them as mere distributing centres", "hastened the disintegration of the old economic system," kept the 500,000 villages entirely cut off from the zones of economic progress, and destroyed the stability of old industrial centres without balancing the loss by the creation of new industrial areas.[1] As late as 1928, the Agricultural Commission had to admit that "most of the 500,000 villages have not yet been touched by metalled road or railway."[2]

Without belittling the advantages of railways, it must be stated that the main effect of the railway expansion in India was to facilitate the transport of goods to the harbours. The railway rates, moreover, were so contrived as to favour the transit of goods to and from the harbours, rather than to favour the development of Indian industries, and foster a many-sided internal trade.[3]

The economic changes which India has experienced during the last hundred years are better described as a commercial rather than an industrial revolution. Relative to the great size of the country and its numerous population, factory industry was still very small, especially upto the first world war. The opening of the railways and the development of inland and foreign commerce have brought specialisation in such commercial crops as cotton, jute, oilseeds, and tea. Whereas the raw agricultural

1 T. N. Ramaswamy, "The Economic Problem of India," 1942, p. 130.

2 Agricultural Commission Report, p. 5.

3 It is interesting to observe a parallel phenomenon in Africa. "What internal African commerce really needed was a system of roads to link up the petty centres of trade and industry and to facilitate the exchange of agricultural products grown on a small scale. But it was not the well-being of African agriculturists that was the primary purpose of those who were responsible for pushing on with the construction of railways. They had as their object the tapping of the various mineral deposits....and the placing on the world markets of agricultural produce grown at cheap rates, owing to the command of cheap native labour. Fundamentally the railways acted as great drains, carrying away the resources of the interior and giving practically nothing in return. They were constructed, on the whole, in the interest of their termini, and not on those of the lands through which they passed." A. G. Russell, "Colour, Race and Empire," 1944, pp. 250-51.

products of the villages were formerly made up by local craftsmen for local use, more specialised products have come to be exported in exchange for factory made goods. "The railways and steamships have made it possible for European power manufacturers to offer the Indian farmers much better terms than the Indian village craftsmen could give. Self-sufficing local economy has been displaced by international specialisation and trade, much to the discomfiture of the Indian craftsman."[1]

This commercial revolution, as Buchanan calls it, brought with it undoubtedly an expansion of commercial crops in agriculture, but it was mostly the pressure of economic environment rather than the obtaining of better terms that led to this expansion, achieved sometimes at the cost of the diversion of land under food crops, if not at the cost of the curtailment of the volume of production. Moreover, the capital in the hands of the village traders was insufficient to finance the cultivation and the ordinary movements of crops; this lack of available capital compelled the ryots to borrow at high rates even for their ordinary needs like the purchase of seeds. "The position of the peasant farmer, with grain seeds, or cotton to sell, and at the same time heavily indebted to his only possible purchaser, effectively prevents him from obtaining a fair market price for his crop."[2]

The craftsmen and artisans of the earlier days had their place in a village economy where they exchanged their products on a customary basis for the food and raw materials necessary for their occupations. This balanced economy was disrupted by the substitution of specialised products in agriculture intended for export rather than for domestic exchange.

Till 1813 India had been chiefly an exporting country. From then onwards it became suddenly an importing country. This transformation took place so rapidly that already in 1823 the rate of exchange which had generally been 2sh. 6d. per rupee sank to 2 shillings. As Marx observes: "India, the great workshop of cotton manufacture for the world since immemorial times, became now inundated with English twists and cotton stuffs."

In 1813, Indian cotton manufacturers were liable to the following charges in England:—[3]

1 Buchanan, "The Development of Capitalist Enterprise in India," 1934, p. 130.
2 Industrial Commission Report, p. 5
3 Digby, "Prosperous British India," p. 90.

	£	s.	d.
Calicoes and dimities (for every £100 of value)	81	2	11
Cotton raw (per 100 lbs.)	0	16	11
Cotton manufactured (per 100 lbs.)	81	2	11
Hair or goat's wool manufactures per cent.	84	6	3
Manufactures of flowered or stitched muslins of white calicoes (for every £100 of value)	32	9	2
Other manufactures of cotton not otherwise charged ..	32	9	2

These burdensome charges were subsequently removed, but only after the export trade in them had been destroyed. In 1853, the total exports to India from Great Britain and Ireland were £8,024,000, out of which cotton goods alone amounted to £5,220,000—more than ¼ of the foreign cotton trade. Cotton manufacture in Britain at the time employed 1/8th of the population and contributed 1/12th of the whole national revenue.

The phenomenal rise in the exports from England to India may be judged by the fact that between 1818 and 1836 the twist imports into India rose in the proportion of 1:5200. In 1824 the exports of British muslin to India hardly amounted to one million yards. By 1837 they exceeded 64 million yards. At the same time the population of Dacca, world famous for its muslins, decreased from 150,000 inhabitants to 20,000. Apart from inundating "the very mother country of cotton with cottons," the British imports into India "uprooted over the whole surface of Hindusthan the union between agricultural and manufacturing industry."[1]

The historian, H. H. Wilson, observes in this connection: "It was stated in evidence (in 1813) that the cotton and silk goods of India upto the period could be sold for a profit in the British market at a price 50 to 60 per cent lower than those fabricated in England. It consequently became necessary to protect the latter by duties of 70 and 80 per cent on their value, or by positive prohibition. Had this not been the case, the mills of Paisley and Manchester would have stopped in their outset. . . . They were created by the sacrifice of the Indian manufacture. Had India been independent, she would have retaliated, would have imposed prohibitive duties upon the British goods and would thus have preserved her own productive industry from annihilation. This act of self-defence was not permitted to her; she was at the mercy of the stranger. British goods were forced upon her without paying any duty, and the manufacturer employed the arm of political injustice to keep down and ulti-

1 Marx, "British Rule in India," in '*New York Daily Tribune*,' January 25, 1853.

mately strangle a competitor with whom he could not have contended on equal terms."[1]

The effect on small industries in India, resulting from the imports of cheap machine-made goods, was far from beneficial. Petty articles of domestic use like scissors, mirrors, bangles and vessels of iron, brass and copper, imported from abroad commanded a ready sale and threw back the village craftsmen and artisans on the land as landless labourers. In the course of the last 70 years, there has been an increasing land hunger, the pressure on the land has definitely grown as evidenced by the following table:—

Area of cultivated land per person dependent upon agriculture

Year	**1901**	**1911**	**1921**	**1931**	**1941**
Acreage ..	1.28	1.24	1.21	1.08	1

The overthrow of the occupational equilibrium of the population is also evidenced by the fact that whereas in 1872 the total number of dependants on agriculture was 61 per cent of the entire population, in 1921 it was 73 per cent; and if the same method of counting had been pursued by the census authorities in 1931, it would have been found to be nearly 75 per cent. The same tendency to increasing ruralisation becomes apparent in the negligible increase in the urban population, an increase of about four per cent in 70 years between 1871 and 1941. The economic history of India from 1770 to 1870 is the history of the dislocation of India's balanced economy, the ruralisation of her population, the progressive decay of her handicrafts and village industries. In short, the old industrial structure was shattered without being replaced by a better organisation.

Growth of Industries upto the Eve of World War I

The period 1850-55 saw the establishment of the first cotton mill and jute mills and coal mining industry. To the same period belongs the first introduction of railways. A short line was started in Bombay, and two others in Howrah and Madras. By 1865 there were ten cotton mills in Bombay City, three more in the Presidency. It has been said that the fears inspired by the Mutiny led Government to construct 3,000 miles of railway by 1865. Two jute mills were working with 950 looms by the end of the same year. By 1877 the number of cotton mills rose to 51 in the whole of India with a million and a quarter spindles and over 10,000 looms. By 1878 the number of jute mills increased to eighteen, coal production amounted to 1,000,000 tons per

1 Quoted in Land Revenue Commission Report Bengal, Vol. I, p. 325.

year, and railways had a mileage of 8,000. By 1890 there were 26 jute mills employing 62,000 workers; and coal production and railway mileage doubled again. The remarkable development that took place in foreign trade between 1860 and 1890 has been explained partly by the institution of free trade, partly by the opening up of the country by railways and by the change in habits of the people which accustomed them to purchases on a cash basis in the rural areas.

Whilst in this way the foundation for the development of modern industries and for the utilisation of our coal and iron resources were laid by the early years of the present century, the transformation of India at the same time into a supplier of food and raw materials to Britain and other countries was achieved at the cost of the ruin of millions of our artisans. By 1900 India had become a great exporter of rice, wheat, cotton, jute, tea and oilseeds, and an importer of British manufactured goods. "The construction of an extensive network of railways during the latter part of the century was perhaps the most important single factor in this transformation of India into an agricultural colony of British industry, since it made possible the commercial penetration of the country by British goods and also the large-scale production and export of raw materials."[1] It is equally significant that British investments in modern industry in India were confined exclusively to enterprises like railways, coal mines, jute mills and to tea, coffee and sugar plantations—industries related to the production and export of raw materials.

The Swadeshi Movement of 1905, which arose at this time partly as the result of non-economic causes, stimulated Indian hand industries and led consumers to prefer Indian products. The movement became stronger after the Civil Disobedience upheaval as the Indian National Congress emphasised the importance of preferring Indian products all round. There was a slow but steady growth in the field of existing industries as well as the establishment of new industries between 1890 and the outbreak of the war of 1914. "Cotton spindles more than doubled, cotton power looms quadrupled, jute looms increased four and half times and coal raising six times, while the extension of railways continued at the rate of about 800 miles per annum."[2] The average daily number of operatives in factories

1 Kate Mitchell, "Industrialisation of the Western Pacific," 1942, p. 280.
2 Buchanan, op. cit. p. 139.

increased from 316,000 in 1892 to 869,000 in 1912 and 951,000 by 1914. But, "prior to the war certain attempts to encourage Indian industries by means of pioneer factories and Government subsidies were effectually discouraged from Whitehall."[1] Cotton and jute textiles were the only major industries for which we had natural advantages and which had scope for development before the first world war.

The following tables indicate the trend in our industrial development to the eve of the first world war:—[2]

Cotton Textile Industry

	1879-80	1889-90	1900-01	1913-14
No. of Mills	58	114	194	264
No. of persons employed	39,537	99,224	156,355	260,847
No. of Spindles	1,407,830	2,934,637	4,942,290	6,620,576
No. of Looms	13,307	22,078	40,542	96,688

Jute Industry

	1879-80	1889-90	1901-02	1913-14
No. of Mills	22	27	36	64
No. of persons employed	27,494	62,789	114,795	216,288
No. of Spindles	70,840	164,245	331,382	744,289
No. of Looms	4,946	8,204	16,119	36,050

Coal Industry

		1885	1901	1914
No. of persons employed	..	22,745	....	151,367
Output (tons)	..	1,294,221	6,038,053	15,738,153

Development During The First World War (1914-18)

The war of 1914 created enormous demand for factory goods in India; imports from Europe fell off, and the war requirements of the Allies increased. The latter included iron and steel, jute and leather and woollen goods. The textile and jute industries made enormous profits and frittered them away in dividends instead of setting them apart for future replacements and development. During the war, Provincial Departments of Industries were established in each major Province. The war, moreover, brought home to the rulers the extent of India's dependence on imports from abroad for plant and machinery. It changed to some extent the British attitude towards industrialisation in India. The failure to develop the basis of heavy industry in India and the necessity of depending for military supplies on the long overseas route had weakened Britain's fighting strength. It was also felt that the growth of industry within India was better than foreign competition in India which was affecting British im-

1 Moral and Material Progress of India, p. 144.

2 Gadgil, "Industrial Evolution of India," 1946, pp. 76-79, 107, 110-11.

ports into India. There was a desire to enlist the support of Indian capitalists in the war by concessions in favour of Indian industries. The establishment of the Munitions Board and the appointment of the Industrial Commission were pointers in this new direction.

During the war period the cotton and jute mills worked at full capacity and made huge profits. Steel production increased from 19,000 tons in 1913 to 124,000 tons in 1918. Due to the cutting off of imports from abroad, the production of some consumers' goods was also developed; but the lack of basic industries prevented us from taking full advantage of the temporary protection granted by the war to various industries.

Thus during the war of 1914-18, the rulers began showing a new interest in fostering a few key industries in India, perhaps under the fear that the Empire might otherwise be endangered. Once this fear was gone, even the halting proposals of the Indian Industrial Commission were shelved. Thus it has not been incorrectly observed that the first world war, "beyond affording temporary gains to a few established industries, did nothing to set the country firmly on the road to industrialisation. After 1918, the few industries which had been established on account of the war either stagnated or decayed; they could not face the competition of advanced industrial countries."[1]

Industrial Development during the Inter-War Period (1918-1939)

The post-war history of industrial development in India like the pre-war history was marked by the complete lack of any consistent policy. The Fiscal Commission in 1922 recommended a policy of discriminating protection which was accepted by the Government in 1923. A number of industries like steel, cotton, sugar, paper and matches were granted protection. In a number of consumer goods like sugar, matches and cement (which was not given any protection) the country reached self-sufficiency. The change in the content of the external trade of India also reflected the same trend, namely, a falling off of imports of consumption goods, like sugar, matches and cement, and an increase in the imports of machinery, raw materials like dyes and paints and optical goods.

During the period immediately following the end of the war, large amounts of British capital were attracted to India. The leading Cotton Mills in Bombay paid 120 per cent by way of divi-

1 Lokanathan, "Industrialisation," Oxford Pamphlets on Indian Affairs, No. 10, pp. 6-7.

dends. The reports of 41 British controlled jute mills with a total capital of £6 million showed profits of nearly £23 million in the four years 1918-21, in addition to £19 million carried to Reserve Funds. British capital was naturally eager to share in these colossal profits. The annual export of British capital to India increased from £14.7 million or 9 per cent of the total in 1908-10 to £29 million in 1921 and £36 million in 1922, or more than one-fourth of the total British exports.[1]

In 1918-19, the number of registered companies was 2,713 with a paid-up capital of about Rs. 106 crores which rose to 4,781 with a paid-up capital of Rs. 223 crores in 1921-22.[2] The post-war boom ended by 1920 and the depression which followed hit the Indian industries hard. These hardships were increased by increasing foreign competition and the currency policy of the Government. Many Indian companies founded during the boom period became bankrupt and even the Tata Iron and Steel Co. was in trouble. Its share of Rs. 75 was quoted at Rs. 10 in 1926, and the company was forced to resort to the London money market for the floating of debentures of £2,000,000.

From 1927 onwards the predominating character of the Indian tariff system was Imperial Preference, which gave British products an advantage over both non-empire and Indian products in the Indian market. In 1932, under the Ottawa Agreements, Imperial Preference was thrust upon India in the face of an adverse vote in the Indian Legislative Assembly. "In this way the tariff system of the early twenties, originally proclaimed as a means for accelerating Indian industrialisation, was transformed into a system which assisted British industry to compete in the Indian market, while giving India in return the privilege of favoured rates for the sale of her raw materials and semi-manufactures in the British market—an obvious attempt to revert to the pre-1914 status."[3] The clash of interests between British and Indian industrialists found expression in the Indian Legislative Assembly when the Trade Agreement between England and India of 1935 extending the principles of the Ottawa Agreements was defeated by a vote of 66 to 58. This vote was over-ridden by the Government, and a similar fate attended a vote of the Assembly rejecting the Trade Agreement of March, 1939.

During the period of depression, 1929-33, the value of Indian exports fell from 339 crores of rupees to 135 crores; the value of

1 Kate Mitchell, op. cit. p. 284.
2 Gadgil, op. cit. p. 243.
3 Mitchell, op. cit. p. 285.

imports from 260 to 135 crores. The payment of home charges and debt interests had to be met by gold exports which totalled £241 million for the seven years 1931-37. Miss Kate Mitchell not incorrectly remarks in this connection, "This gold drain from the past savings of the masses of the Indian peasantry meant a still further impoverishment of the Indian market and a corresponding depression of Indian industry."[1] The following table reflects the changes that have taken place during 1922-39 in the production of a few leading industries in the country:—[2]

	1922-23	1938-39
Cement (in tons)	193,00	1,170,000
Coal (in millions of tons)	19	28.3
Cotton piecegoods (in millions of yards) ..	1,713.5	4,269.3
Jute piecegoods (in million of yards) ..	1,187.5	1,774
Matches (in million of gross boxes) (1934-35)	16.5	21.1
Paper (in tons)	23,576	59,198
Pig iron (in tons)	455,000	1,575,500
Sugar (in tons)	84,000	1,040,000
Sulphuric acid (in cwts.)	529,600	607,000
Steel ingots (in tons)	131,000	977,400

There can be no doubt that in spite of the difficulties and obstacles which India had to face, there was a considerable progress in industrial development during the inter-war period, specially after 1923 when the policy of discriminating protection was adopted. India was placed as one of the eight leading industrialised countries of the world. The cotton textile industry increased its production from 1,164 million yards in 1913-14 to 3,975 million yards in 1938-39. The numbers employed by this industry increased during the same period from 260,000 to 442,000. Another industry which developed to a great extent and which justified the grant of protection and subsidies was the steel industry. By 1932-33 it began to supply nearly three-fourths of the Indian market for steel. The total annual pig iron production increased from 243,000 tons in 1914-18 to 1,495,000 in 1934-38.

To sum up the industrial development between 1922 and 1939, the production of cotton piecegoods in the country increased two and a half times, that of steel ingots rose eight times, and of paper went up two and a half times. In the case of sugar India became self-sufficient within a period of four years 1932-36. The cement industry produced about 95 per cent of the total requirements by 1935-36. Other industries like matches, glass, vanaspati, soap and a number of engineering industries also witnessed increased pro-

1 *Ibid.*, p. 286.
2 Lokanathan, op. cit., p. 8.

duction. A beginning in the manufacture of electrical equipment and goods was also made by 1938-39.[1]

Even this limited trend towards industrialism created doubts in the minds of some who thought India's economic salvation could only lie in adhering to its predominantly agricultural organisation.

Writing about the economic development of India during the inter-war period, Dr. Anstey observed: "The recent expansion of industrial output owing to the protective policy has been achieved at the expense of the cultivators who have to pay for what they have to buy, and who are dependent on world prices for what they sell. My own conclusion is that India cannot expect to proceed far or fast upon the road of large-scale industrial development and that intensification of protection would merely increase the profits of a small section of the population at the expense of the masses."[2]

The view which was representative of British economic thought in reference to India failed to take into account two considerations: (1) that every country considers it desirable to secure an occupational equilibrium for its population, and (2) that the prosperty for the agricultural classes in India is largely dependent on the increased purchasing power, which the growth of industries might make possible. The concern for the masses of the rural population was not put forward for the first time by economists belonging to a country that had changed over from protection to free trade, and from free trade to protection, according to changes in its economic environment.

In spite of all the development that took place, the picture of industrial growth between the two wars suggests a slow rate of development, as seen from the figures of workers employed in industries returned under the Factory Act. Between 1897 and 1914 the number of industrial workers had increased from 421,000 to 951,000, while between 1922 and 1939, it increased from 1,361,000 to 1,751,000. Even the *Economist* in its survey of Indian industrialisation at the end of 1936 observed: "Although India has begun to modernise her industries, it can hardly be said that she is as yet being 'industrialised.' "[3]

There are many in this country who would agree with this verdict of the *Economist* and who not unreasonably regard the result of Indian industrialisation as disappointing. There are many who would ask if this country had acquired that balanced

1 First Five Year Plan, p. 421.
2 O'Malley, op. cit., pp. 292-8.
3 *Economist*, India Supplement, London, December 12, 1936.

economic life, with an improved standard, for which the full utilisation of her industrial resources in an industrial age hold out reasonable promise. As Buchanan aptly remarks: "Here was a country with all the crude elements upon which manufacturing depends, yet during more than a century it has imported factory made goods in large quantities, and has developed only a few of the simplest industries for which machinery and organisation had been highly perfected in other countries. With abundant supplies of raw cotton, raw jute, easily mined coal, easily mined and exceptionally high grade iron ore; with a redundant population often starving because of lack of profitable employment; with a hoard of gold and silver second perhaps to that of no other country in the world, and with access through the British Government to a money market which was lending large quantities of capital to the entire world; with an opening under their own flag for British business leaders who were developing, both at home and in numerous new countries, all sorts of capitalistic industries; with an excellent market within her own border and near at hand in which others were selling great quantities of manufactures, with all these advantages India, after a century, was supporting only about two per cent of her population by factory industry."[1]

The economic situation before the outbreak of the second world war may be summed up as follows so far as industrial development is concerned. The expansion of the protected industries did not mean very considerable addition to the total national income. The existence of these industries and their ability to meet the requirements of the internal market could not be regarded as giving to the country that degree of self sufficiency which might relieve it of all anxiety about the future, for, whilst we were independent of foreign countries for the supplies of sugar, for cotton goods, and for iron and steel, we were still largely dependent on foreign countries for the offtake of a substantial part of our production of raw materials. What is more important is that we were still dependent on foreign countries for the supply of machinery and other capital goods without which the establishment of new industries would be impossible.

Indian Industries during the Second World War[2]

The outbreak of the war in 1939 left the Government of India unchanged in its general attitude towards the development of Indian industries. It was believed that it would suffice

1 Op. cit. pp. 450-451.
2 We are indebted to Kate Mitchell's book for a portion of this section.

for the Government of India to act as it had acted during the course of the last war, by placing large scale orders for sand bags and other military requirements and by securing supplies and foodstuffs and raw materials for the fighting forces. The weakness and insecurity of the industrial structure of India were fully exposed when even such well-established industries like textile, paper and leather which require large quantities of chemicals found their supplies cut off. Their dependence upon imports for such essentials as caustic soda, bleaching powder, soda ash, sodium carbonate, etc., revealed the precariousness of their growth in the absence of the development of a heavy chemical industry.

But the character of the second world war created a far more urgent demand for industrial production than had the war of 1914-18. Japan's entry into the war made it doubly necessary that India should be developed as speedily as possible into an industrial arsenal for the Allied forces. The fall of France, the bombing of British factories and the large-scale sinking of British ships, the Japanese penetration into the Southern Pacific demonstrated the dangers to an empire with widely scattered lines of communication. India and Australia were chosen as centres of supply. Before the outbreak of the war, for instance, India was entirely dependent on foreign sources for high grade steel, for most of steel manufactures and for all types of machinery. By the end of 1941, however, pig iron production increased from 1,600,000 tons in 1938-39 to 2,000,000 tons. Finished steel production increased from 867,000 tons in 1939 to 1,250,000 tons in 1941 and to 1,400,000 tons in 1942. A programme costing four crores for the expansion of armament works, explosive plants and small arms factories was initiated in 1941. At the end of 1941, ordnance factories were assisted by 250 trade workshops and 23 railway workshops, producing 700 different items of munitions supply. Fifty-four firms were licensed to manufacture machine tools and lathes, drilling, shaping and planning machines, furnaces and power blowers. Over 280 new items of engineering stores were being manufactured in India ranging from small tools and machine parts to heavy calibre guns, torpedo boats, and degaussing cables.[1] There was a considerable expansion in the production of drugs, leather manufactures, hardware, glassware, cutlery and optical goods. The beginnings of a heavy chemical industry were made in 1941,

1 *Indian Information*, October 1, 1941.

resulting in the production of sulphuric acid, synthetic ammonia, caustic soda, chlorine and bleaching powder. The Hindustan Aircraft Company at Bangalore assembled its first plane in August, 1941, from imported parts. It need not be added that India still remains completely dependent upon imported engines in the manufacture of aircraft, of tanks and armoured cars. A general indication of the increase in India's industrial production is to be found in the increase of the value of exports of manufactured articles from Rs. 476,000,000 in 1938-39 to Rs. 812,000,000 in 1940-41.

The Eastern Group Conference, the Report of the Grady Commission and the appointment of a number of technical missions may be regarded as war measures forced upon a reluctant Government which could never contemplate with equanimity an India that would cease to be a supplier of raw materials and a market for finished goods. It was a British engineer, who made a special study of iron resources in India, namely, Sir Guildford Molesworth, who observed as early as 1902 at a public meeting in London: "England, in her dealings with India, has committed the same blunder as she has committed in her dealings with Ireland....She has persistently drained her resources, swamping her with English and foreign production, and instead of fostering her industries has handicapped them in every way ....Many attempts have been made to revive and start afresh iron industries, but they have one and all been crushed out for want of a little fostering protection."[1]

The main object for which the Eastern Group Conference was held in India was to make the countries of the Eastern Group as far as possible self-supporting for war supply purposes. It was expected to lay down a policy for co-ordinating the present and potential resources of the countries forming the Eastern Block with a view to eliminate duplication and wasteful competition. The Conference finished its labours in November, 1940. But whilst the contents of the report must have been known to the leaders of thought in other countries which were parties to the Conference, the report and the recommendations of the Conference were not published in the country in which the Conference was held. Moreover, one of the members of the Conference, Sir Walter Massey Greene, had declared that one of the chief purposes of the Roger Mission was to see that there was no duplication, and what one country was doing the other parts of the Em-

1 Quoted by Buchanan, op. cit., p. 469.

pire should not do. This was regarded as deliberate hindering of the development of the aircraft industry in India, as Australia was already manufacturing aeroplanes. The Grady Commission that followed (March, 1942) also made an elaborate report on the possibilities of establishment of new industries for which the country is fully equipped. But here again India was never given an opportunity of getting acquainted with the report and studying its details. What is still more noticeable is the fact that representatives of Indian Commerce and Industries were never fully associated with the work of the Conference or the Commission.

During the first two years of the war, the Government of India continued the traditional policy of supplying Great Britain with available goods and raw materials. Railways were dismantled, wagons and rails and locomotives were dispatched wherever they were needed without any arrangements being made for their manufacture at home. As. Dr. Lokanathan observes: "The contrast between India and Australia and Canada has been striking. Starting from an initially worse position than India, Australia increased her steel production rapidly, and within two years was able to manufacture aircraft, wireless and other articles directly through Government effort, and also by inviting British, American and other industrialists to set up factories to replace imports. In Canada the Government created seven Government-owned Corporations, for manufacturing planes, shells, rifles and instruments, one for procuring machine-tools and two for purchasing vital war commodities. In India, even the manufacture of locomotives, already recommended by an expert committee and for which blue prints were ready, was given up at the last moment on the ground that it was more desirable to import them from abroad."[1]

Similarly, a proposal for the establishment of an automobile industry was placed before the Government of India as early as the year 1936. The first Congress Government of Bombay provisionally had promised to guarantee the interest on the share capital of the project for a term of ten years. The promoters of the scheme spent money, energy and time and even entered into an agreement with one of the world's foremost manuufacturers. The Government of India after nearly five years of consideration turned down the proposal in December, 1940, on the ground of difficulties created by the war.[2] This was done at a time when

1 Lokanathan, op. cit., p. 15.

2 Sir M. Visvesvaraya's Presidential Address, All India Manufacturers Conference, March, 1941.

the Government of India were not only in urgent need of automobiles of all kinds but were placing orders for the same on a large scale abroad.

There is considerable ground for saying that in spite of the life and death struggle in which Britain was involved and the utmost importance of industrial production in India, British policy during the early years of the second world war was opposed to any rapid growth of heavy industries in India controlled and managed by Indians. The Secretary of State for India, reporting in eloquent terms about war efforts in India, told the House of Commons on November 20th, 1940, that "India will soon be self-sufficient in respect of something like 90 per cent of her military supplies." It would appear as a matter of fact that the supplies, in respect of which India was to be self-sufficient, consisted of clothing, small ammunition, foodstuffs, tents and blankets. "By the autumn of 1941, only the smallest beginnings had been made in the development of the metallurgical, chemical and other heavy industries for which India possesses all the necessary raw materials, and nothing had been done to eliminate the twin bottlenecks of lack of machinery and a shortage of skilled labour which continued to cripple India's efforts towards industrial expansion."[1]

The following table shows in index numbers the development in various industries during the war period:—[2]

Index of Industrial Production
1937=100

	Cotton Textiles	Jute	Steel	Chemicals	Sugar	Cement	Paper	General Index
1938	109.0	98.3	108.0	84.4	88.7	124.8	121.6	105.4
1939	104.3	92.4	125.0	103.9	62.5	152.9	135.1	102.7
1940	103.6	96.1	125.5	133.3	106.0	152.1	169.7	109.9
1941	114.8	92.4	131.1	153.2	108.2	185.8	185.4	117.8
1942	102.0	99.5	136.7	138.7	78.4	194.5	180.9	111.2
1943	117.0	84.4	141.5	138.6	95.3	188.4	179.2	117.0
1944	122.9	86.7	139.6	126.3	97.1	182.1	192.7	117.0
1945	120.0	84.4	142.9	134.1	85.5	196.5	196.5	120.0
1946	101.9	84.6	130.0	111.2	80.5	181.1	193.4	109.0

It will be observed that the increase in industrial output was roughly about 20% during these five years. With the definite inflationary tendencies that started with the unprecedented issues of paper currency from 1940 it was not unnatural that there should have been a spurt of new company floatations. To check these inflationary tendencies Government resorted to a number of measures including the control of capital issues which was

1 Kate Mitchell, "India's Economic Potential," in *Pacific Affairs*, March, 1942, p. 23.

2 Quoted in Fiscal Commission (1949-50) Report, p. 21.

brought into operation from May 1943. Till the end of 1943, 687 applications for starting new industries or expanding existing ones with a capital of Rs. 25 crores were received. The following table of the working of capital issues control from its inception to the end of March 1944 is of some interest:—

	No. of cases disposed of	No. of cases agreed	Total capital asked (in lakhs of rupees)	Total capital agreed (in lakhs of rupees)
Initial Issues				
1. Chemicals, etc. ..	67	54	273	128
2. Iron, Steel and Engineering	50	39	223	121
3. Transport ..	95	95	148	148
4 Agriculture ..	38	31	—	116
Further Issues				
1. Chemicals, etc. ..	65	56	189	146
2. Iron, Steel and Engineering	59	55	178	135
3. Transport ..	21	21	22	22
4. Agriculture ..	64	57	—	182

Transport and agricultural companies were obviously the "pet preferences" of the sanctioning authorities."[1]

The figures of average daily numbers of workers employed by different industries, published in the Indian Labour Gazette, showed that the total employment, in perennial and seasonal factories, increased by about 31% from 1939 to 1942, while that in perennial factories alone increased by about 27% during the same period. Making allowance for the loss of efficiency during the war period due to deterioration of equipment, the continuance of extra-marginal firms in production, etc., the figures of employment might be taken to indicate an increase of not more than 25% in industrial production. In almost all cases production reached its peak during the war years. Since then, there was a continual fall in production. In some cases production had fallen even below the pre-war level.[2] The peak production of textile mills was 4,826 million yards in 1943-44, steel 1,160,000 tons in 1943, of cement 160,000 tons per month, and of paper 100,000 tons in 1945. The paid up capital of joint-stock companies increased from Rs. 290 crores in 1939-40 to Rs. 424 crores in 1945-46.

The conditions created by the war led to maximum utilisation of existing capacity in Indian industries though they were not quite favourable for the development of new industries on a large scale. A number of industries, however, like ferro-alloys, non-ferrous metals like aluminium, and antimony, diesel engines, pumps, bicycles and sewing machines, chemicals like soda ash, caustic soda, chlorine and superphosphates, and certain kinds of

1 *Eastern Economist*, 17th November, 1944.
2 Gadgil and Sovani, "War and Indian Economy" 2nd Edit., 1944, p. 123.

machine tools were started on a modest scale, during the period of the second world war. A greater stimulus was, however, given to medium and small-scale industries like cutlery, pharmaceuticals, medicines and drugs.[1] The conditions of inflation and a sellers' market gave a great impetus to the production in established industries which worked multiple shifts, and the difficulties of imports of essential requirements led to tremendous wear and tear, which it will take the country several years to make good.

We have an effective summing up of industrial development during the second world war by Dr. P. J. Thomas in these words: "Old industries have grown, new industries have been started, new plants laid, and new technical skill built up. . . . the manufacture of machine tools has been firmly established and the engineering industry has been greatly enlarged. . . . In the result, our basic industries have also expanded, new basic industries have also been planted and India's industrial structure has been greatly enlarged. We were thus put on the road to a broad-based industrial development which may soon rectify the lopsidedness that has long characterised Indian manufacturing industry."[2]

During the war the Government of India worked a scheme for training 48,000 industrial workers by March 1943. The Bevin Scheme provided for an intensive course of training of Indian workmen in British factories. The Government of India appointed a Board of Scientific and Industrial Research with Sir S. S. Bhatnagar as President in 1940 with a grant of Rs. 5 lakhs for research in the Alipore laboratory. The financial position of the Board was strengthened by the creation of a special Industrial Research Fund in 1941 with an annual grant of Rs. 10 lakhs for a period of five years. The Research Board devised many new methods of production and found a number of indigenous substitutes for peace-time imports and developed the use of vegetable oil lubricants, drugs, dyes, plastics and shellac. An Industrial Utilisation Committee was also appointed for the purpose of fostering industrial development. The Grady Commission recommended plans for importing essential machinery and rationalising of engineering workshops. Assurances were given by Government for protection to certain industries against competition after the war.

It seems that, in spite of the strain and stress of the second world war, Great Britain was still dominated by econmic in-

1 First Five Year Plan, p. 421.
2 "India's Basic Industries," 1949, Preface, p. ix.

terests in her relations with India. This was not only borne out by the differential treatment of Canada and Australia but by her policy in the matter of our aircraft manufacture, the automobile industry and shipbuilding. In November, 1940, Mr. Santhanam pointed out in the Legislative Assembly that Indian interests had offered, at the outset of the war, to construct an aircraft factory without any Government subsidy, but that the project had been delayed for fifteen months by the Government's refusal to agree to buy planes.[1] Mr. Santhanam further stated that proposals about building up the shipping industry in India were made, but the Board of Trade in England had definitely said that they would not render any help in the promotion of shipbuilding in India as a part of war effort.[2] With regard to automobile manufacture Sir M. Visvesvaraya, representing a group of leading manufacturers accused the Government of making a tweny-five years contract with an American firm, and obstructing the construction of an Indian automobile plant. The Government of India. in reply to these charges, issued a communique in December, 1940, declaring that the Government were "very sympathetic" to these projects, but that there were "considerable difficulties" in the way of their attainment. Even as late as May, 1942, in reply to the question regarding aircraft industry the Government spokesman replied in the Assembly that Government confidently hoped that "the air factory will complete its programme of fighter and bomber construction before the end of the present calendar year."[3] We have not yet heard of this hope being fulfilled.

The Grady Mission found that "India's mètallurgical resources were largely unused. . . . The Indian industries that had been developed were operating largely on a business-as-usual basis, and no Government agency existed to convert them to war work. The lack of skilled labour was not a major barrier to industrial development." The Grady Mission pressed for India's full development and met with considerable resistance. There was a tension between the British and American Governments, and the rivalry of British and Indian manufacturers in India.[4]

We have ample raw materials, adequate supplies of labour; the war gave a powerful stimulus to the development of industries. If in spite of the favourable environment created by the war, and in spite of all the advantages we enjoy, we still lag

1 Kate Mitchell op. cit., p. 22.
2 Legislative Assembly Debates Vol. IV, Nov. 1940, p. 405.
3 *Ibid.*, Vol. I and II. 1942, p. 651.
4 Michael Straight, "Make This the Last War" 1943, pp. 131-132.

behind in large-scale industrial enterprise, we might well be excused if we looked for the causes of our economic and industrial backwardness in the then lack of power to control our own economic destinies.

Industrial Development in the Post-War Period

The post-war period was naturally a critical period for our industries. The major portion of our industrial equipment had been tremendously over-worked during the war period, had become obsolete and urgently needed repairs and replacement. The neglect of long-term factors, like advantages of location and large-scale operations, adequate markets and proper financial and technical organisation to keep a hold in competitive markets, which were neglected during the inflationary conditions of the war period, began to be felt in the post-war years. Our industrial production had showed a downward trend even before the end of the war, which was accentuated during the post-war years. The output continued to be much below capacity in most industries. Anticipating a post-war depression, schemes of public works and development were drawn up and put into effect. But the anticipated depression did not come off, and a new spurt of inflation followed as a result of the attempts to build up a developmental economy on the basis of the war economy without allowing the latter to return to normalcy. The indecent haste with which the Excess Profits Duty was removed, and other measures aiming at a decontrol policy, strengthened inflationary forces. The huge amounts of blackmarket money made available by war profits enabled Indian businessmen to buy up a number of foreign concerns which were sold at huge profits. The Liaquat Ali Budget which followed brought consternation to industrialists and led to a "strike" by capital. Despite this, this country witnessed a general development and the growth of new industries. The Partition of India had its repercussions on our economy and seriously affected our jute and cotton textile industries. The jute mills are in Calcutta but major areas of raw jute are in East Bengal. Similarly, the textile mills of Bombay and Ahmedabad became dependent on Pakistan for the long staple cotton of Sind and West Punjab.

In view of this situation Government convened a tripartite Conference on industrial development in December, 1947, which reviewed the problems of Indian industry and defined the objective of Governmental policy. Government later on drew up plans concerning 32 industries whose difficulties were expected to be

tided over in about 18 months, and various committees were set up to draw up plans for the allocation of materials in short supply.

Progress in Indian Industries (1946-51)[1]

The development of our industries in the post-war period can be measured by the rate of investment in various branches of industry and by the increased installed capacity and increasing production of various commodities. With regard to the volume of investment no comprehensive data are available which would enable us to determine the amount of replacement expenditure or new investment in industries. Taking as a guide the imports of machinery on private account in the five year period and adding to them other fixed assets, like buildings and land, calculated as a ratio between the value of plant and machinery and the value of total fixed assets, adding to them further the requirements of working capital, we may arrive at a rough estimate of the amount of investment in new industries. The problem is made more complicated by the fact that whereas, upto 1948, the sea-borne trade figures showed under separate heads the imports of machinery on private account and on Government account, in subsequent years the two are lumped together. Moreover, working on the assumption that the proportion of imports of machinery on Government account to imports on private account remains stable would not be quite safe, as the development projects of Government gained momentum after 1948, and allowance would have to be made for this factor. After making all these allowances, the total amount of investment in new industries was round about Rs. 290 crores in the five years, 1946-51. This is exclusive of another Rs. 125 crores of imports of machinery to meet the replacement needs of existing industries.

The following table shows the growth in installed capacity and production in five years of a few typical industries:—

Industry	Installed capacity in 1950 Units	Production in 1950 Units	As percentage of 1946 Installed capacity	As percentage of 1946 Production
Diesel Engines	5,300	4,596	680	971.7
Power-driven Pumps	33,460	30,292	310[2]	480[2]
Electric Motors	1,49,500 (H.P.)	81,795 (H.P.)	250	178.3
Sewing Machines	37,500	30,892	255	504.7
Radio Receivers	77,200	45,100	965[2]	1,484
Hurricane Lanterns	36,00,000	28,06,822	554	597
Sulphuric Acid (tons)	1,50,000	1,02,480	187	170.8
Soda Ash (tons)	54,000	43,790	100	364.9
Caustic Soda (tons)	19,068	10,846	180	374
Superphosphates	1,34,800	52,432	268	1,165.2

1 We are indebted to "The Record of Indian Industries 1946-50," issued by the Federation of Indian Chambers of Commerce and Industry, Delhi for this section.

2 Percentage of 1947.

The development of new industries during the five year period has been most noticeable in the engineering and chemical groups. In the case of diesel engines apart from the growth in manufacture upto 1951, three more projects for manufacture have been sanctioned and it is expected that the existing capacity will be increased twofold.

The automobile industry has made rapid strides with five leading firms for manufacture and assembly of parts, having a total investment of over Rs. 10 crores. At present India is importing 20,000 cars and 15,000 trucks at a cost of Rs. 17.5 crores. The existing units in the industry have long term production plans which will meet eventually the entire demand for cars and trucks. The estimated requirement in 1954 is placed at 40,000 units. So far the industry is said to be the only one of its kind in Asia. Five crores of rupees have been invested in developing another new industry, of vital importance to India's textile industry, namely, the manufacture of textile machinery. The industry bids fair to supply the total requirements of ring frames, carding engines and looms. The production of power-driven pumps was undertaken only after the end of the war; today production has even outstripped installed capacity. The number of units engaged in producing power-driven pumps doubled from 4 in 1947 to 8 in 1950.

The radio receiver industry which included only two units in 1947 had 11 units by 1950, producing 45,000 receivers during the year. The electric lamp industry which had a capacity of 5.45 million numbers possessed by 4 units in 1939 now has 10 units with a total capacity of 23 million numbers. Domestic production in electric fans is enough to supply the country's annual requirements of 200,000 fans. Among other consumer goods in the manufacture of which we have made progress may be mentioned stainless steel cutlery, steel furniture of excellent quality and the dry cell industry, razor blades and clocks, drums and containers, ball bearings and piston rings, antimony and semi-manufactures like brass and copper sheets.

In the field of chemicals may be mentioned the production of soda ash, caustic soda and liquid chlorine. The country, as a result of development, is today self-sufficient in a number of chemicals like sodium sulphate, sodium silicate, calcium chloride, potassium bromide, epsom salt and magnesium chloride. As many as sixty companies were authorised to issue capital amounting to

about Rs. 30 crores for the manufacture of fine and heavy chemicals, including pharmaceuticals.

Apart from the engineering and chemical groups, among the major industries established after 1940 may be mentioned plastics engaged in the manufacture of articles like electric accessories, radio parts, bottle caps, buttons, handles, cutlery and tooth brush handles, table ware and toilet articles. The rayon yarn industry and paints and varnishes, vegetable oils, soap and rubber manufactures, bicycles, glass and starch, all alike bear witness to rapid growth and expansion. Major existing industries like cotton textiles, cement, paper, etc., besides replacements and renovation undertaken, have added tremendously to their pre-war capacity.

Concluding Remarks

The economic evolution of India from the days of the East India Company can be briefly summarised in terms of capitalistic development.[1] The development of merchant capitalism in England found expression in the establishment of various trading companies, notably the East India Company, which from the early days of its activities in our country was intrumental in exporting from India those goods which offered handsome profits. Then followed the Industrial Revolution, largely financed by Indian funds, which transformed the merchant capitalism of earlier days into an industrial capitalism. The new situation thus created had its repercussions on India which by this time had been brought under the political control of England. A series of Reform Acts which culminated in the abolition of the trade monopolies of the East India Company, and ultimately in the transfer of the Government of India from the Company to the Crown, contributed to the growth of a foreign trade which provided raw materials for British factories in return for British manufactures imported into India. Our balanced economy was upset; transport facilities helped the development of foreign trade by opening up the whole country for commercial penetration; and vast accumu-

1 The growth of capitalism can be traced through three definite phases; (1) merchant capitalism, the first phase, in which capital plays a vital part in the commercial sphere and particularly in foreign trade. The merchant is the capitalist; (2) industrial capitalism, the second phase, brought in with the Industrial Revolution. The ground for this had been prepared by the commercial revolution of the earlier period. In this epoch, the industrialist employs his own capital in the manufacture of goods. The key note of this phase is "free competition." This phase ultimately evolves into monopoly capitalism, when the financier becomes separated from the industrialist, giving rise to (3) finance capitalism, the third phase, in which the financiers lend money to the enterprenenrs for industrial purposes. In this phase, finance instead of being a servant of industry becomes a master and the financier exercises all control. Thus, "free competition" of the period of industrial capitalism, which replaced feudal monopoly and monopoly of merchant capital, becomes gradually transformed into finance capital monopoly.

lations of British capital—the result of heavy tribute drawn from India in the shape of industrial profits—began to flow into India for investment in railways and plantation industries. Banking based on British lines afforded facilities for foreign trade. The development of railways is associated with that of industries. As Marx had predicted: "When you have introduced machinery into the locomotion of a country, which possesses iron and coal, you are unable to withhold it from its fabrication; you cannot maintain a net of railways over an immense country without introducing all those industrial processes necessary to meet the immediate and current wants of railway locomotion, and out of which there must grow the application of machinery to those branches of industry not immediately connected with the railways. The railway system will, therefore become in India truly the forerunner of modern industry."[1]

The development of modern industries in India began with the plantation industries like jute, tea, coffee. The Indian bourgeoisie which had in the first phase confined itself to foreign trade and merchant capitalism now took to the development of the textile industries and ushered in the phase of industrial capitalism. In England, finance capitalism had by this time replaced industrial capitalism. Attracted by the prospects of huge profits to be made in India by the development of industries, foreign and more particularly British capital found scope for investment in Indian industries. It was a struggle for indigenous capital to establish itself against the inroads of foreign capital. The outbreak of the first world war, the stimulus of the Swadeshi movement and the adoption of a policy of discriminating protection led to the development of Indian industries, widening the sphere of employment of indigenous capital. The unique feature of industrial organisation is the managing agency system which with its financial integration began the phase of finance capitalism. The feature that calls for attention in the economic development of India is that in spite of the limited industrialisation in our country, finance capitalism strengthened during the second world war is rapidly replacing industrial capitalism and our industries today are in the grip of finance capitalism—Indian as well as foreign. The new phase of capitalist development which can be described as "controlled" or "planned" capitalism, had a favourable soil for growth in the period of world depression that started about 1929, and this growth was accelerated during and after the second world war

1 "The Future Results of British Rule in India" *New York Daily Tribune* 8th August, 1853.

all over the world. It is but natural that our own economy should reflect world trends in the formulation of the Five Year Plan.[1]

CHAPTER XIX

PRINCIPAL ORGANISED INDUSTRIES

The industries of India, apart from agriculture can be conveniently considered under two heads, according as they are small-scale industries, hand-operated, or large-scale industrial concerns with power driven machinery. The total number of factories increased from 10,466 in 1939 to 12,527 in 1942 and 14,761 in 1945 according to the returns of the Factory Act. The number was 14,576 in 1947, 15,906 in 1948, 19,829 in 1949, and 27,754 in 1950.

The following table shows the number of workers employed in factories:[2]

Average daily number of workers employed in factories

1945	2,642,949	1948	2,360,201
1946	2,314,587	1949	2,423,966
1947	2.274,689	1950	2,504,399

These figures suggest that the Partition of the country has not substantially affected our organised industries, as the figures from 1948 relate to the Indian Union only. According to Prof. C. N. Vakil out of the total number of factories, 14,677, employing 3,141,774 workers, 13,263 with 2,735,729 workers remained in the Indian Union—i.e., 90.4 per cent of the factories, and 93.5 per cent of the operatives.[3]

Cotton Mill Industry

The cotton textile mill industry celebrated its centenary this year. It has had a chequered carreer, and despite the protection granted to it, it has failed in consolidating its position. The second world war gave the industry a sheltered home market and huge military orders. Its production reached the peak figure of 4,493 million yards in 1942-43. The Five Year Plan has fixed the target of 4,700 million yards to be attained at the end of 1956.

The old cotton industry of India has had an honoured history, but this was primarily based upon excellence of workmanship. The first products were made from raw staple of the

1 For a detailed discussion of this new stage see our "Bombay Plan—A Criticism," (1946) and "Five Year Plan—A Criticism," (1952).

2 Indian Labour Year Book, 1950-51, p. 2.

3 "Economic Consequences of Divided India," 1950, pp. 243 *et seq.*

very highest quality. Cotton cloth was one of the products which appealed to the Western countries from early times. Cotton grown in America fed the Lancashire mills in the days when the industry was revolutionised by power machinery. In 1895, that is, some time after the establishment of the cotton industry in India, along with the import duties at the rate of 5 per cent on all cotton piecegoods and cotton yarn above 20 counts, a countervailing excise duty of 3½ per cent was levied in India. The excise duty, according to the then Finance Member, Sir James Westland, "was recommended to us by superior order—an order which we are obliged to obey." So far as our cotton industry is concerned, Lancashire influence made itself felt in the past to a considerable extent. In a letter to the London *Times* of June 2nd, 1908, Lord Curzon observed, "Ever since India was ordered to abolish her customs tariff in 1875, it has been in the main in response to Lancashire pressure that the successive readjustments of this policy have been introduced." The excise duty which was "politically, economically, and above all normally indefensible" and which was considered in India as "imposed out of fear of the Lancashire votes" was finally abolished in December, 1925.[1] As Buchanan observes, "For India, cotton manufacture is ancient glory, past and present tribulation, but always hope."[2]

The Government of India was interested in the problem of improving Indian cotton from the very beginning. For a long time it was American cotton that supplied the demand of Lancashire, as the U.S.A. cotton crop yielded more than 200 lbs. of cotton per acre as compared with the Indian yield of about 100 lbs. per acre. In 1917 the Government of India appointed a Cotton Committee to investigate into the possibilities of growing long staple cotton in the country. It reported that "India cannot, for at least ten years, grow cotton in any large commercial quantity of a staple longer than 1 1/16th of an inch." Even this hope of the Cotton Committee was not realised. In 1926, we produced only about six per cent long staple cotton in terms of the total crop. In 1950-51, twenty-one per cent of the total cotton crop was classified as long staple.

Indian cotton, however, though it ranks at the bottom of the list with Chinese cotton in length of staple, and though the

1 London *Times*, 5th March, 1917, quoted by C. N. Vakil, in "The Industrial Policy in India," 1933, p. 43.

2 Op. cit., p. 194.

Indian fibre is at present unfit for spinning yarns finer than 30 counts, has provided for all the requirements of the Indian cotton industry. The Indian mills use limited amounts of longer staple cotton in the production of finer counts, which are imported from Egypt and Uganda.

India to-day is one of the leading countries of the world in the cotton industry. "She ranks fifth in the number of spindles, fourth in the quantity of raw cotton consumed, third in the number of persons employed and second in raw cotton production."[1] The following table shows the development of cotton industry during the last 70 years:—[2]

Year	No. of mills	No. of spindles (in 000's)	No. of looms	No. of persons employed
1880-84	63	1,611	14,500	51,000
1910-14	257	6,406	88,100	243,800
1936	379	9,857	200,000	418,000
1939	389	10,059	202,000	442,000
1947	423	10,354	203,000	488,000
1948	408	10,266	197,000	466,000
1949	416	10,534	198,000	463,000
1950	425	10,849	200,000	434,000
1951	445	11,241	201,000	425,000
1952	453	11,427	204,000	433,000

The following table gives us an indication of increase in production of cloth during the last forty years:[3]

Year	Total cloth production in Indian Mills in 000,000 yards	Year	Total cloth production in Indian Mills in 000,000 yards
1912	1,136	1947	3,810
1922	1,731	1948	4,423
1932	3,170	1949	3,806
1936	3,572	1950	3,645
1939	4,113	1951	4,188
1943	4,749	1952	4,593
1946	4,025	1953 (Jan.-June)	2,447

Between 1901 and 1946 (with 1901 as the base period) the number of mills increased by 237 per cent, the number of spindes by 214 per cent and looms by 500 per cent. Piecegoods production went up during the same period by 783 per cent.[4]

1 *Ibid.*, p. 199.

2 Figures upto 1936 include Burma and from 1948 onwards are for Indian Union only. (Indian Cotton Textile Industry Annual, 1952-53, p. i). According to the Bombay Millowners' Association, the total number of workers employed in 453 mills is 743,000. This is only an indication of the relativity of the connotation of the term "accuracy" in a country like India. A difference of 300,000 is immaterial in God's great gift of hundreds of millions.

3 Figures from 1943 onwards from "Facts About the Cotton Mill Industry of India," Millowners' Association, Bombay, 1953, p. 5.

4 Vide "The Indian Cotton Textile Industry, and its Past, Present and Future" by Dr. N. S. R. Sastry in Centenary Volume, Cotton Textile Industry (1850-1950), edited by M. P. Gandhi, 1951, p. 17.

The chief development of cotton manufacturing has been in the West, centring in Bombay State, especially in Bombay City. Outside Bombay City, the chief centres of the industry in the State are Ahmedabad and Sholapur. Important factories are also to be found in Madhya Pradesh, Madras and Bengal. In the early stages of the development of the industry, Bombay City was the centre, as the mills produced yarn which was exported to China. Raw cotton was detained in the port only long enough for spinning, and was then exported as yarn. Moreover, mill machinery had to be imported from abroad, and the difficulty of transporting heavy machinery to places outside the reach of the railway system determined the location of the industry in port towns like Bombay and Calcutta. Even the spare parts of the mill machinery were not locally available in the early days and had to be imported from abroad. Coal and steam power were not easily available outside the areas served by railways. The cost of carrying coal from the pit-head to places where it was required compelled the factories to depend on imported coal. The relatively greater centralisation of the cotton industry in Bombay can also be accounted for, when we remember that Bombay enjoys a more favourable position as compared with other centres in regard to markets like East Africa and Sudan.

A larger amount of capital is invested in cotton than in any other Indian industry. According to Mr. Desai, the paid up capital in the textile industry was about Rs. 50 crores, the bulk of which belonged to about 150 managing agents' firms. The block or fixed capital was about Rs. 100 crores. It had about 200,000 looms and one crore of spindles. It used to produce about 420 crores yards of cloth before the war, and employed 500,000 workers. Due to the starting of night shifts since the outbreak of the second world war, the number of employees had increased to about 700,000.[1] 99 per cent of its total capital was said to be in Indian hands. Profits during the first world war and post-war period were high. From an article contributed by Mr. J. A. Wadia in the *Times of India* in December, 1926, it would appear that for the twenty one years ending December, 1925, the gross profits of ten Bombay mills including agents' commissions averaged 38.8 per cent. According to the Bombay Millowners' Association the capital invested in the

1 Vide—"Indian Textile Industry—War Period, (1939-46)", by K. K. Desai, M.L.A., Textile Labour Association, Ahmedabad.

cotton textile mill industry is Rs. 104 crores, and the annual turnover amounts to Rs. 350-400 crores.

Imports of Piecegoods

The development of the cotton industry in England turned India from being an exporter of hand-made cotton goods to Europe into an importer of cotton goods after 1830. Between 1840 and 1858 imports of cotton yarn and cotton cloth into India constituted from one-half to two-thirds of the total value of her imports; mostly these imports were from the United Kingdom. In spite of the development of the industry in India, British imports, particularly of cloth, increased until in 1913-14 they were over 3,000 million yards or 2½ times India's own mill production. From 1890, however, the Indian cotton mills had captured some part of the home and the Near East markets. With the outbreak of the war in 1914, the exports of the United Kingdom fell off. Cotton spindles in Japan, China and India together more than doubled as shown by the following table:—[1]

	1914	1930	Increase
Japan	2,414,544	6,837,000	4,422,456
India	6,397,142	8,807,000	2,409,858
China	300,000	3,699,000	3,399,000
Total	**9,111,686**	**19,343,000**	**10,231,314**

In the five years, 1897-1901, Indian mill-made cloth constituted only ten per cent of the total internal cloth consumption, as compared with 27 per cent woven on hand-looms and 63 per cent imported. In the five years, 1920-25, Indian mill-made cloth supplied 38 per cent of the internal demand, as compared with 29 per cent woven on hand-looms and 33 per cent imported. In 1931-32, the percentages were 56.6 for the mills, 29.7 for the handlooms and 13.7 for imports. In 1940-41, the percentages were 64.7 for the mills, 28 for the hand-looms and 7.3 for imports. In 1951 the percentages were 79.8, 19.9 and .3 respectively.

So far as outside markets are concerned, Indian mills were gradually eliminated. On the other hand, during the inter-war years, they have had to meet new foreign competition within their own borders. Whereas in the earlier days the imports were mostly of high grade goods from England, coarser and relatively finer goods from Japan and China gradually found their way into the Indian market, particularly in piecegoods. In 1913-14, the United Kingdom and Japan furnished respective-

1 Pearse, "The Cotton Industry of India," 1930, p. 1, quoted by Buchanan, op. cit.

ly 97 per cent and 0.3 per cent of the imports of cloth. The table below shows how the United Kingdom lost and Japan gained in imports between 1913-14 and 1940-41 :—

Cloth Imports Into India

Year	United Kingdom	Japan
1913-14	97.1	0.3
1923-24	88.8	8.2
1929-30	65.0	29.3
1932-33	48.7	47.3
1936-37	43.7	54.4
1940-41	12.5	80.5

In 1923, when the cotton industry suffered from the after-effects of the crisis of 1921, it had to face at the same time increasing competition from foreign products. In 1926, a special Tariff Board enquired into the conditions of the cotton industry with special reference to Bombay and Ahmedabad. The mill industry in India had entered on a period of depression, after 1923, partly due to the loss of the export trade in yarn to China, partly due to the stabilisation of rupee at 1s. 6d., and partly due to Japanese competition. Apart from cheap labour and the double shift system, Japan's competitive strength lay, from the mill-owners' point of view in (1) the superior organisation and finance of the Japanese mills, (2) superior marketing, (3) the opportunities for purchase of raw material, having alternative sources in India and the U.S.A. and (4) the temporary depreciation of the yen. The Tariff Board recommended protection, and under the Indian Tariff Act 1927, a duty of 5 per cent *ad valorem* was levied on imported cotton yarn. Subsequently in 1930 higher duties were levied on piecegoods. The issue of protection was further complicated by the Ottawa Trade Agreement of 1932, under which Britain agreed to encourage the purchase of Indian cotton in view of preferences granted to her in the finer qualities of piecegoods.

The increasing Japanese imports led Government in 1933 to renounce the Indo-Japanese Trade Convention of 1904, which provided for mutual "most favoured nation" treatment, and raised the duty on non-British piecegoods to 75 per cent. Japan retaliated by a boycott of Indian raw cotton. Negotiations followed; and an agreement in 1934 alloted to Japan an annual import quota of 125 million yards unconditionally, 325 million yards if she purchased 1,000,000 bales of Indian cotton, and 400 million yards if she purchased 1½ million bales. The

duty on non-British goods was fixed at 50 per cent and the agreement was to remain in force till 1937. At the same time, a trade agreement was signed on behalf of the British and Indian Governments in January, 1935, providing (1) for the retention of Imperial Preference and for the existing margin of preference, (2) for the removal of surcharges on cotton piecegoods when the surcharges of 1931 were removed from the generality of goods and (3) for affording opportunities to any British industry to state its case before the Indian Tariff Board. In return, the British Government gave assurances that the use of Indian raw cotton in England would be encouraged.[1] By the Indian Tariff (Amendment) Act, 1947, Government converted the existing protective duties on cotton cloth and yarn into revenue duties in accordance with the recommendations of the Tariff Board in February, 1947. The imports of cloth fell from 21 million yards in 1942 to 3 million yards in 1945, but increased in the post-war years, reaching the maximum of 91 million yards in 1949. Since then they have declined to less than 10 million yards.

There was a great increase in the export of piecegoods due to the war, which stopped exports from Japan and England. Exports increased from 177 million yards in 1938-39 to 390 million yards in 1940-41 and 819 million yards in 1942-43, but dropped to 461 million yards in 1943-44, and continued to decline perhaps as a result of control. The greater portion of the increase was due to the activities of the U.K.C.C. and to government purchases. At the same time there was a relative scarcity within our country, with soaring prices and a flourishing black market in spite of textile control.

The Partition of the country in 1947 reacted somewhat unfavourably on the cotton textile industry. It deprived the Indian Union of about 15 mills, with 88,000 spindles and 6,000 looms as well as 22,000 workers. A more serious effect was the loss of an assured internal market of cloth to the extent of 800 to 900 million yards which were once part of the home market. With the increasing development of the textile industry in Pakistan, the capture of the Pakistan market by Japan and the continuing strained relations between India and Pakistan, our textile industry has had to seek alternative markets. More-

1 Although this agreement did not require ratification either by the British or the Indian Legislatures, a resolution for its rejection was carried by 70 votes to 65 in the Indian Legislature on the 30th March 1936.

over, India had hitherto enjoyed the advantage of self-sufficiency in cotton, except, for small quantities of long staple varieties. Instead of being in a position to export over 2½ million bales of cotton, we have now to face a large deficit in this essential raw material.

The exports of cotton cloth received a great stimulus during the second world war, reaching the peak of 1061 million yards in 1942, valued at Rs. 39 crores. Since then they have fallen as low as 269 million yards valued at Rs 21 crores in 1947. The Partition has made the significance of exports all the greater, as about 20 per cent of the industry's pre-war output used to be absorbed by the areas now included in Pakistan. Due to the competitive position enjoyed by India during the post-war period, our exports increased reaching a high level of 1133 million yards valued at Rs. 80 crores in 1950. Since then, the emergence of competition from Britain and more recently from Japan has brought down our exports to 586 million yards valued at Rs. 55 crores in 1952.

The removal of control by Government on prices and distribution after a period of ten years in July 1953 has left the industry free to market its products in a competitive market. There is an internal market of vast dimensions. The present consumption of 15 yards per head per annum admits of considerable expansion. Even a small increase in the purchasing power of the masses in India may give rise to such a demand for clothing and for cotton piecegoods as to throw into the shade any incidental advantages which the war brought to it or which an export market can afford.

Future of the Cotton Industry

The expansion of the cotton industry during the last two or three decades has not been due to any increase in the purchasing power of the people, but to the huge war orders from the supply department and to some extent to an increasing demand from neighbouring countries. It is difficult to anticipate the place of India in the reconstructed economic order of the future. The insistent clamour for the restoration of free trade principles and of equal access to raw materials for all countries would seem to perpetuate an economic order such as prevailed in the nineteenth century. Under such an order countries like India were to be producers of raw materials for the benefit of the highly industrialised countries. The international econo-

mic order of the future with intensified competition on the part of Western industrialised countries would seem to offer no possibilities for the expansion of Indian exports in foreign markets. The war on the other hand with its curtailment of imports gave to the cotton industry in India an opportunity to plan its production in such a way as to consolidate its position in the home market. This opportunity might well be said to have been lost by a short sighted policy of sacrificing wider interests for the sake of immediate returns in the shape of high profits.

There is another problem that the cotton industry has now to face. This is the relation of the machine industry to the hand-loom industry. Despite the passage of years and the existence of acute competition from the mechanised industry, the hand-loom weaver has managed to survive and to maintain himself with undiminished strength. The handloom industry is responsible today for 20 per cent of the total production; it may almost be called a part and parcel of the agricultural organisation of India, as it provides an occupation for the cultivator in the season when agricultural work is slack. Hitherto in spite of the importance of this industry and its organic relation to agriculture, statistics about the number of people engaged in this occupation and the number of looms as well as production of cloth were completely lacking.[1] The main objective of the mechanised cotton industry for the future should be the co-ordination of its own production with the production of the hand-loom industry so as to make India self-sufficient in the matter of cotton goods. The high standard of excellence reached by the hand-loom workers in the past gives us hope that a flourishing hand-loom industry can subsist side by side with its machine counterpart with the help of co-operative societies and direct Government assistance. What is needed is careful co-ordination and planning between large-scale industrial enterprise and the handicrafts. Industrialisation does not necessarily mean large-scale factory production. In Soviet Russia, for example, the Five-Year Plan laid considerable stress on the development of hand industries and the promotion of co-operative societies and Gov-

1 The report of the Fart Finding Committee (Handlooms and Mills) appointed in 1941 gives us statistical data regarding this important industry. According to the Report the number of weavers for all India is 24 lakhs, with another 36 lakhs, some paid and some unpaid, of auxiliary workers assisting them, thus making a total of 60 lakhs, with 20 lakhs of looms. Assuming three dependants on every worker the committee estimates the total population dependent on hand-loom weaving at about 10,000,000. This industry which consumes on an average 684 million lbs. of yarn, produced in 1951-52 about 924 million yards of cloth.

ernment agencies, which could supply the artisans with raw materials and tools and take charge of the distribution of the finished wares.

With the virtual loss of the overseas markets which we might not regain, or in which we have to face severe foreign competition, the cotton textile industry which was greatly stimulated as the result of the war must be very careful with regard to the future. It has risen to its present position by the sacrifices of the masses. It must not, therefore, try to replace the hand-loom weaving industry's market in order to make up for the loss of the overseas market.

Is such careful planning possible? There are problems before the textile industry which seem to land us in a dilemma from which it is difficult to escape. We talk of increasing the purchasing power of the masses by increasing production, but under present conditions increasing production does not lead to lower prices, and we may reach our targets of production and even over-reach them without bringing the products within the purchasing capacity of the masses. If the cotton textile industry is to remain within the private sector, it can, it is suggested, lower costs by modernising equipment and by a policy of rationalisation, and the introduction of machinery which would save labour. As regards rehabilitation by modernising machinery, which is in urgent need of replacement, the second annual report of the Industrial Finance Corporation pointed out that "that very few textile mills have adequate reserves to pay for new equipment at present prices to replace their old machinery."[1] It has been estimated that the cost of rehabilitating 150 uneconomic units in the industry will amount to Rs. 100 crores, and a plea is urged for increased Governmental assistance in the shape of depreciation allowance and a more liberal policy in the matter of sales tax and excise.

As regards rationalisation, the President of the I. N. T. U. C. uttered a warning at a high level Conference called in New Delhi by the Planning Commission in April, 1954. If the object of planning in India was to expand employment opportunities rationalisation "would reduce the employment capacity of the textile industry from 700,000 to 200,000."[2] He suggested the establishment of new industries prior to rationalisation. He also pointed out that if only a few mills could afford rationalisation, their com-

1 Quoted in "Facts about the Cotton Mill Industry in India," op. cit. p. 13.
2 Quoted in *Times of India*, 14 April, 1954.

petitive advantage will drive other mills out of production and create more unemployment. Such a scheme of rationalisation may further affect the hand-loom industry, already passing through a crisis. Even the Millowners' Association realise that in a country like India, where there is abundant manpower, rationalisation should be undertaken in stages to avoid aggravation of unemployment.[1]

The textile industry, as a private enterprise, has a past history of wasting away its resources in high dividends to shareholders, instead of building up reserves to meet depreciation and replacement. It has looked to Government help for protection at the cost of the consumer, and indulged in unsocial practices that have lowered its prestige both at home and abroad. Today, even with lack of modernised machinery it has almost reached the target of production which the Planning Commission assigned to it for the end of 1956. Nevertheless, it has failed to capture the home market by lowering prices. There seems to be no way out, it is said, except to nationalise the industry with a view to eliminating the profit element, and bringing the product within the reach of the millions. And yet, nationalisation on a basis of compensation seems to be beyond the resources of a Government already committed to a policy of deficit financing.

Iron and Steel Industry

Iron and steel, the basis of the Industrial Revolution, in the West, were known to India from early days. Our country had developed high grade steel for the manufacture of weapons, tools, etc. The famous Damascus blades were forged from steel imported from Hyderabad in India. The equally famous iron column on the site of the Kutub Minar at Delhi weighing over six tons and forged about 415 A.D., is an eloquent testimony to the high stage of development of the iron industry in India. Even to-day one wonders as to how it was possible to forge such a pillar in those early days. The Agarias, the iron smelting caste, were to be found all over the country. Only a century and a quarter ago, Dr. Francis Buchanan had found many of these smelters in India. But, just as the machine-made, cheap, imported cotton goods had destroyed our cotton industry, the cheap iron goods imported from Europe destroyed the trade and industry of the Agarias and turned them into labourers who increased the pressure on land.

1 The need for research into the problems of the industry has been met recently by the establishment at Ahmedabad of a Textile Industries Research Association at a cost of Rs. 50 lakhs the Government of India contributing Rs. 19 lakhs.

The earliest attempt to make iron by Western process was made about 1830 in Madras. In 1875 attempts were made to smelt iron by means of coal instead of charcoal, and a company was started for this purpose on the Raniganj coal field by the Bengal Iron Company. This company closed down after four years and the Government acquired the plant in 1881, working it till 1889, with two blast furnaces. The plant was then sold to a new Bengal Iron and Steel Company. About 1919 a new company was launched, the Indian Iron and Steel Company, with up-to-date American plant.

The Tata Iron and Steel Company was formed in 1907, and commenced operations five years later. It owns iron mines, limestones, quarries, magnesite deposits and coal mines. After the crisis of 1921, the steel industry in India had to face the competition of foreign producers of steel, who were dumping their steel in every market. When the Indian Tariff Board was appointed, the iron and steel industry was the first to claim protection. The Board reported in favour of protection and an Act was passed levying specific duties on imported iron and steel materials, and granting bounties for the manufacture of rails, fish-plates, etc. A bounty upto 50 lakhs of rupees on steel ingots was sanctioned and in 1926 higher specific duties were provided for. In 1933, there was a fresh invesigation by the Tariff Board, which came to the conclusion that the protection afforded to the Industry in 1926 had proved successful, and that a stage had been reached when no further protective duties were required on imports. The Government of India accepted the recommendation of the Board, that if duties were necessary they were needed more as anti-dumping than as protective duties.

In 1936, the Indian Iron and Steel Companies were reconstructed and the Steel Corporation began working in November, 1939, with a plant capable of producing 250,000 tons per annum. From the outset of the war, an arrangement was arrived at between the Tata Iron and Steel Company and the Government by which all the steel required by the Government for war purposes was given priority over all other requirements, and the prices were fixed at the pre-war level. These prices, however, were subject to revision every six months in accordance with a reduction or increase in the cost of manufacture.

The growth of the iron and steel industry may be illustrated by the following tables:—

In thousands of Tons

	1933-34	1936-37	1939-40	1949	1950	1951
Pig iron	1,109	1,552	1,838	1,609	1,678	1,823
Steel Manufactures:						
1. Iron casting	68	99	129	1,352	1,437	1,499
2. Steel ingots	721	861	1,070			
3. Semis	99	78	872	1,105	1,142	1,248
4. Finished steel	452	613		930	1,004	1.076

Exports in thousands of tons

Year	Pig Iron	Iron & Steel	Year	Pig Iron	Iron & Steel
1927-28 ..	393	59	1940-41 ..	599	104
1933-34 ..	377	91	1941-42 ..	521	40
1937-38 ..	629	87	1942-43 ..	242	6
1939-40 ..	572	106	1943-44 ..	184	2

The fall in exports after the outbreak of the war does not need any explanation. The development of a basic industry like the Iron and Steel has led to the rise of various subsidiary industries like engineering, wagon-building, tin-plate, wire and wire nails, agricultural implements, enamelled ware, etc.

The opportunities afforded by the war led to a number of developments in connection with the industry, like the setting up of a magnesite plant for manufacturing presize magnesite, manufacture of stainless steel, alloy and tool steels, high speed steels, etc. The Tatas started a factory to manufacture boilers and locomotives.

Due to conditions created by the war, the production of finished steel reached the peak of 1,356,000 tons in 1941-42. According to the Iron and Steel Panel, the requirements of India will be about 2½ to 3 million tons per annum in the next few years. Taking into account the various expansion schemes, involving the use of steel there would be a gap of 1 to 1½ million tons to be filled. The Tata Iron and Steel Co. have undertaken an expansion scheme which aims at increasing their production from 750,000 tons of steel to 931,000 tons per annum by 1956-57 at a cost of Rs. 23 crores. The Government of India has granted a loan of Rs. 10 crores, the balance to be met by the Company from its own resources. Moreover, under a Steel Companies Amalgamation Act, 1952, the Indian Iron and Steel Co. has been amalgamated with the Steel Corporation of Bengal. The Amalgamated Company is to expand its production at an estimated cost of Rs. 35 crores with a loan from the World Bank of Rs. 15 crores with Government guarantee. This sets up a dangerous precedent to bolster up private enterprise under international auspices.

The Government of India during the current year has entered into an agreement with a German combine of which the details are not yet available, for the establishment of a steel plant at an estimated cost of Rs. 72 crores of which the German investment will be Rs. 9½ crores. The country will have to watch with the utmost anxiety the prospects of a vital industry like iron and steel in which private enterprise will have to compete with State enterprise, and where foreign capital on private account and on State guarantee will create complex problems of price control and taxation. There can be no more obvious evidence of the absence of a clear cut economic policy than in the case of a key industry like iron and steel, where a mixed economy in the one and the same field of industry is further complicated by the association in a common partnership of the Government of India with a foreign industrial concern.

Jute Industry

The jute industry is a vital industry in the economy of the country as the largest earner of foreign exchange. With the advent of Partition the greater proportion of the acreage under jute went over to East Bengal, while the capacity for manufacture was retained intact in the Indian Union. In undivided India, there was a virtual monopoly of raw jute. After Partition India was producing only 17 lakhs bales against Pakistan's output of 68 lakhs bales. With acute dependence for raw material supplies on Pakistan and with trade deadlock between the two countries following the devaluation of the Indian rupee in 1949, a critical situation developed. The Indian Government stepped up production with a view to self-sufficiency, and the situation has considerably improved with two large crops in 1951-53.

The following table gives us details about the acreage and production of raw jute in Indian Union from 1936-37 adjusted for Partition:[1]

Year	Acreage (000)	Yield 000 bales 400 lbs. each	Year	Acreage (000)	Yield 000 bales 400 lbs. each
1936-37	854	2,234	1947-48	652	1,658
1938-39	853	1,638	1948-49	834	2,055
1940-41	1,143	2,773	1949-50	1,163	3,089
1942-43	852	1,637	1950-51	1,454	3,301
1944-45	581	1,164	1951-52	1,951	4,678
1946-47	537	1,320			

Thus in a period of three years there has been an increase of a million acres and of a million and a half bales in production. To-

1 Culled from "India at a Glance,"' 1953, p. 1220.

day India grows 4.6 million bales out of an estimated demand of 6 million bales by the jute mills in India.

The following table indicates the distribution of looms in different countries:[1]

India	68,416	France	7,000
Germany	9,600	S. America	6,000
Great Britain	8,500	Italy	5,000

The following table shows the progress of the industry in recent years.[2]

Year	No. of Mills	Paid-up Capital	Looms	Spindles
1912-13	—	£ 28,44,000 Rs. 6,83,17,000	34,000	709,000
1922-23	86	Rs. 17,24,78,000 £ 21,25,000 $ 1,70,00,000	47,500	1,003,000
1931-32	103	Rs. 19,76,49,000 £ 25,25,000 $ 1,20,00,000	61,000	1,220,000
1938-39	107	Rs. 20,30,55,000 £ 25,25,000 $ 37,50,000	67,900	1,350,000
1945-46	111	Rs. 25,53,20,000 £ 25,25,000 $ 50,00,000	68,300	1,445,000
1949-50	86	Rs. 24,91,80,000 £ 25,25,000 $ 50,00,000	62,000	1,243,000

Progress of Indian Jute Mills[3]

Year	No. of Mills	Production (000 tons)	Exports of Jute goods (000 tons)	Average daily number of hands employed (000)
1947-48	104	1035	896	315
1948-49	104	1040	872	303
1949-50	104	825	754	278
1950-51	104	858	547	284
1951-52	104	945	797	276
1952-53	104	820	730	270

From the capitalist point of view, the jute industry may be said to be the best organised industry in India. The Jute Mills' Association was organised in 1886, and has been instrumental in bringing about concerted action and co-operation between the jute companies. These companies have frequently co-operated in the limitation of output through short-time operation. The Government of India has appointed the Indian Central Jute Committee to watch over all the branches of the jute industry. Until a few years ago, the capital of these companies was in the hands of ster-

1 *Ibid.*
2 *Ibid.*, pp. 1221-22.
3 Major Industries Annual, Vol. II, 1953, edited by M. P. Gandhi, p. 109.

ling holders in Great Britain. Even Americans have invested several million dollars in the enterprise. During the last decade or two, however, there has been a transfer of capital from British to Indian hands, but the management is still foreign.

Between 1915 and 1929, the jute mills paid handsome dividends to the shareholders. With the coming of the economic depression in 1929, the industry passed through a period of difficulties. The difficulties were aggravated by unhealthy competition of mills which were not members of the Indian Jute Mills' Association. The Bengal Government was compelled to intervene when what appeared to be a crisis was reached in the industry, due partly to discontented labour force, partly to declining prices for manufactured goods, and partly to the difficulties of the cultivators of jute.[1] An ordinance was promulgated in 1936 prohibiting all jute mills in Bengal from working more than 45 hours per week. This was followed by a new working time agreement between the mills, limiting production. The outbreak of the war in 1939 changed the situation and brought about a big jump in production and profits.

It is difficult to judge the future prospects of the industry. The outbreak of the war involved the loss of European markets, and though the industry derived substantial benefits during the first year of the war, it had to face the problem of disposing of a huge surplus crop of jute. According to calculations of the Jute Mills' Association, even on the basis of 54 working hours per week, 25 per cent of machinery is redundant. Mere restrictions on output, voluntary or compulsory, cannot solve the difficulties of this industry. The initial stimulus which fell off as the war progressed was artificial. The peak production of jute manufactures, including twist and yarn, was reached in 1941-42 at 1,279,000 tons. Jute is India's biggest dollar earner. In 1951-52, the export of jute manufactures was valued at 168.1 crores of rupees. The earning of dollar occupies a vital position as a means of importing machinery that we need.

1 "During 25 years after the last world war, there was not a single occasion when the jute-grower received adequate price for his crop although very high profits have been earned by the mills. In many cases, prices of raw jute were insufficient to pay for cost of cultivation. Many will remember even today that a few years back, probably in 1936 or 1937, jute was allowed to rot standing in the fields as the price did not justify the cost of cutting a crop which had already been sown. In spite of these facts, every year the agriculturist has been fooled into planting more jute than the market actually wanted. Combinations among Jute Mills for depressing prices are facts only too well-known.

Even in 1941-42, we find that 2,751,000 acres were planted with jute. If only half of this area was planted with rice, then, allowing for comparatively low yield on a soil made poor by jute, at least 1,45 lakh mds. of rice could have been grown. This amount would have substantially reduced the normal deficit of rice."

("*Modern Review*, February, 1944, Notes, Jute—Bengal's curse.)

Surveying the problem in February 1952, Mr. K. D. Jalan, President of the Indian Jute Mills' Association, observed: "What now stares us in the face is that the demand for our goods by the two countries, U.S. and Argentina, previously taking over 65 per cent of our hessian production is now halved in relation to an output which is itself down by a quarter of its previous level, and raw jute costs are beyond our control. In contrast with earlier days, India's monopolistic position has entirely disappeared. European producers who previously supplied 3.8 per cent of the American trade increased their percentage in 1951 to 16.8. Substantial quantities have been taken from Continental producers and new jute manufacturing industries are springing up not only in countries cultivating a fibre akin to jute, but in Pakistan where there is first class jute in abundance at a cost cheaper to them than to us." In the last few years substitute fibres have been grown in the U.S.A. and in Belgian Congo as well as Brazil. Paper bags have been coming into use in the place of jute bags both in the U.S.A. and in Canada for handling the potato trade.

The remedies suggested by the jute interests were largely accepted by Government. In March 1951 Government abolished control over raw jute and jute goods. There was a sharp rise in prices, but within a few months prices were pressed down, due to the prospect of a bigger crop and the overseas resistance to high prices for jute goods. The jute mills had already permanently sealed 12½ per cent of their looms. Throughout 1952 difficult conditions prevailed in the jute market. The duty on the export of jute and jute manufactures which had been raised to a phenomenonally high level during the Korean War had to be brought down to enable a revival of the export trade and a commission was appointed to inquire into the problems of the industry. The history of the industry is a history of the persistent exploitation of the jute grower and the consumer by the foreign manufacturing interests.

Sugar Industry

Among the protected industries of India, sugar occupies a unique position. Within a few years of the grant of protection, the sugar cane industry made enormous strides, outstripping even the annual consumption of the country. Modern large-scale crushing plants are established all over the country, with a potential capacity for a production far in excess of the internal demand. Due to the outbreak of the War, the Central Government announced in September, 1940, that no tariff board would be appointed

as was announced by them in March, 1939. Acts were passed continuing the existing duties. On the recommendation of the Tariff Board in 1950, the protection was terminated after a period of 18 years. But the protective import duties have been replaced by a revenue duty of the same amount from 1st April, 1950.

The progress of the industry is indicated by the following table:[1]

Year		No. of mills	Sugar produced from cane (000 tons)	Imports of sugar (000 tons)	Net production of gur consumption (000 tons)
1931-32	..	31	158	536	2,758
1938-39	..	139	651	342	2,131
1944-45	..	140	953		3,633
1945-46	..	145	944		3,578
1946-47	..	140	901		3,574
1947-48	..	134	1,075	20	3,492
1948-49	..	134	1,030		2,830
1949-50	..	139	975		2,714
1950-51	..	138	1,114	65	2,800
1951-52	..	139[2]	1,485	N.A.	N.A.
1952-53	..	136	1,318	N.A.	N.A.

Sugar production in India is classified under three heads: (1) by modern factories working with cane; (2) by modern refineries working with raw sugar (gur); and (3) by indigenous open pan concerns. Along with a rapid increase in internal production there has been a sharp decline in imports. From an average of 1,000,000 tons in the years uptil 1930-31, imports dropped to 250,000 tons in 1933-34 and to 198,000 in 1935-36. In 1936-37 the net import was only 11,960 tons. The imports rose to 342,000 tons in 1938-39 in view of the deficit in home production. The imposition of an excise duty at the rate of Rs. 1-5 per cwt. on factory sugar, and ten annas on Khandsari sugar from the 1st April, 1934, yielded a revenue to Government of Rs. 97 lakhs in 1934-35 and Rs. 2½ crores in 1936-37. With the increase in excise duty, Government realised Rs. 4.22 crores in 1938-39.

Till 1931, India used to import ten lakhs of tons of sugar valued on an average at Rs. 15 crores per annum. From being a country which was mainly dependent on foreign sources for its requirements in sugar, India has to-day become the largest sugar producing country in the world. In the short period of a quinquennium, our production rose to about 12 lakhs of tons per year.

A study of the Indian sugar industry reveals the fact that the production of gur is about three times as large as the production

1 "India at a Glance," pp. 1278 and 1281. Figures for gur production are taken from Indian and Pakistan Year Book 1952, p. 195.

2 158 according to R. Owen, op. cit. p. 181.

of sugar in the country. About 60 per cent of the cane crop of the country is consumed for the manufacture of gur. With the increase in the spread of tea habit and the substitution of sugar for gur in the sweetmeat trade, and the demand for a clean product from sugar cane, we might expect a decrease in the demand for gur. But this has not been the case. The replacement of gur by sugar will depend on the level of the prices of sugar and gur. But it has to be remembered that 70 per cent of our population live in villages and, therefore, even a slight difference of price in favour of gur will mean a perpetuation of the present demand for gur. Moreover, the fact that our *per capita* consumption of sugar is very low can be seen from the following figures:—

Per capita sugar consumption in lbs. (1949)

U.K.	..	112.6	Australia	..	114.5
U.S.A.	..	103.2	Japan	..	29.1
Germany	..	63.3	India	..	29 (including gur)

According to Prof. Adarkar, the sugar industry has given new employment to at least 25 lakhs and an indirect employment to about 25 lakhs of people. "Thus the total employment caused by protection in a year of moderate results (1935-36) has been to the tune of about 50 lakhs of workers."[1] India is the largest producer of sugar in the world, the total yield of raw sugar being over five million tons, with a capital investment estimated at Rs. 36 crores. The total value of sugar and gur produced is about Rs. 280 crores per year and this is the second largest national industry, next to the cotton textile industry, employing over 130,000 workers, in addition to 3,500 graduates and technicians and 20,000,000 cultivators, with a capital investment of about Rs. 36 crores.

In order to avert internal unchecked competition due to the great fall in prices of sugar, the Indian Sugar Syndicate was formed in 1937 comprising over 90 mills. The Government was approached by the Syndicate for legislation to curtail production and overcome internal competition which had resulted in very low prices of sugar. The Governments of U.P. and Bihar passed Sugar Factory Control Acts and made it compulsory for every mill to get a license. Thus, the Indian Sugar Syndicate was legally recognised and all the mills in the U.P. and Bihar were compelled to sell sugar through the Syndicate. In 1940, the life of the Sugar Control Acts was extended to June 30th, 1944, and a Sugar Commission was appointed by them to be "a final authority, subject to Government Control, on all matters connected

1 B. P. Adarkar, "The Indian Fiscal Policy", 1941, pp. 201-202.

with the production and sale of sugar." The U.P. and Bihar Governments, restricted by means of quota, the production of sugar in factories in U.P. and Bihar. The U.P. and Bihar Sugar Control Acts ceased to be operative from June, 1952.

An International Sugar Agreement between twenty-one major sugar producing countries was signed by the Government of India in May, 1937, which regulated export quotas and thereby India was banned from exporting sugar by sea to any country except to Burma for a period of five years. But India was declared a free market. This ban prevented India from exporting sugar when there was a growing international sugar shortage.

As Prof. Adarkar aptly observes in this connection, "When the major sugar producing countries of the world, comfortably sheltered behind tariff walls in their own or in associated markets, are able to sell their sugar at differential prices in the free markets, the 'self-denying' ordinance imposed upon this country by the Government is an interesting commentary on their anxiety to help our struggling industries."[1] It is interesting to note that even within the British Empire, Indian sugar did not enjoy any quota or privilege granted to the other sugar producing countries of the Empire. The International Agreement, however, expired on 1st September, 1942 and the Government of India decided not to give the proposed extension to the International Sugar Agreement.

In order to help the cane cultivators, the Government of U.P. and Bihar fixed the minimum prices of cane during 1939-40. An inter-Provincial Sugar Control Board of U.P. and Bihar was appointed. The recent development of sugar industry in other States threatens its position in U.P. and Bihar. The industry needs to be regulated and controlled by an all-India policy in order to arrest the great danger of over-production.

Another important problem connected with this industry is the proper and planned utilisation of its by-products, especially the production of power alcohol which would certainly lower the cost of production of sugar. The annual consumption of petrol in India during 1936-38 was 100,000,000 gallons on an average. With the development of motor transport in India greater imports of petrol have been necessary. Since the separation of Burma from India, it is desirable to develop an alternative source of motor fuel inside the country. Out of the 300 or 400 thousand tons of molasses, which are running to waste at present,

1 *Ibid.*, p. 253.

it would be possible to produce 19 to 25 million gallons of power alcohol. According to estimates the cost of producing power alcohol would be between 4½ to 6 annas per gallon. Adding an excise duty of 10 annas, it may still be possible to sell power alcohol at Re. 1 per gallon. But so long as there are oil interests represented by companies like the Burma Oil Co. and the Anglo-Persian Co., attempts at the development of power alcohol as a by-product of the sugar industry will always be attended with difficulties. If the cost of production in the sugar industry is to be reduced in the future, utilisation of molasses will have to be actively encouraged. The Power Alcohol Committee appointed by the U.P. and Bihar Governments had made its recommendations in 1938, but the opposition from the Central Government and the vested petrol interests did not allow much progress in actual production of power alcohol. The exigencies of the war, however, led to the passing of Power Alcohol Acts in U. P., Bihar and Bombay. The Grady Commission discussed this question and orders for six or seven plants were reported to be placed in August, 1942. There were three major distilleries producing power alcohol in British India during the pre-war period. At the beginning of 1951, there were 19 power alcohol distilleries established in different parts of India with the annual rated capacity of 13 million bulk gallons of power alcohol and 3 million bulk gallons of commercial spirit. The Five Year Plan aims at an increase of power alcohol production from 4.32 million gallons in 1950-51 to 18 million gallons in 1955-56.

It would also appear that mill consumption of cane is the most economical method of utilising the cane and avoiding the wastage involved in gur manufacture. We need not only regulation of the cane crop but of sugar production for the purpose of preventing over-production by legislation or by agreement among the factories.

The Imperial Sugar Cane Station at Coimbatore, the Sugar Cane Sub-Station, Karnal, and the Agricultural Section, Imperial Agricultural Research Institute, Delhi, carry on sugar research work. The Imperial Institute of Sugar Technology at Kanpur started in October, 1936, advises sugar factories on improvements in working of plants, manufacturing processes, technical control of manufacturing operations, etc., besides giving training in sugar technology.

The war necessitated the institution of control by Government over prices and distribution in April 1942. The aim of the

control was subsequently widened to include maximisation of production also. A controller of sugar was appointed who was made a controller of gur in addition. Government also appointed the Indian Sugar Cane Control Committee to help the industry in its attempts to reduce the cost of production. The main function of the Committee was to improve and develop the growing and marketing of sugarcane and the manufacture of products of sugarcane and other matters. Despite controls the interests of the consumers were sacrificed to the blackmarketing interests of the producers.

The history of the sugarcane and sugar industry during the last two or three years makes curious reading. The production of white sugar today has reached the target of 1½ million tons which the Planning Commission had laid down for 1955-56. In September 1952, it was reported that the quantity of unsold sugar in factories was between 400,000—500,000 tons. Government had moreover, 200,000 tons of sugar on its hands. The gap between production and consumption could be accounted for by the high price of sugar in relation to the purchasing power of the masses. The reluctance of the sugar mill owners to start operations was explained away by their inability to pay the cane grower, as the banks were not willing to advance them money. The cane growers had to face the problem of falling prices of cane from Re. 1/12 per maund to Re. 1/5. They met the situation by burning some of their standing crop. Instead of allowing the consumer to benefit by falling prices, the Food Minister assured the sugar manufacturers the profit they would obtain at the old prices by levying an addtional excise duty to recover the loss incurred by reduction in factory prices of the controlled stocks. In the absence of control the entire sugar production of 1952-53 would have been brought into the market. Government, however, prevented the new stock from coming into the market and lowering the price of sugar. Controls in India have been normally worked in the interests of profit earners rather than for the benefit of consumers, the only justification for controls. Because of high prices surplus stocks accumulate with factories; controls empower Government to encourage the export of the surplus—which is not a surplus in the sense of a remainder beyond self-sufficiency. When, as the result of exports, prices show an upward trend, Government arrange for imports to keep prices down. It is difficult to find a parallel in short-sightedness and inefficiency in the field of economic policy such as is displayed in the history of sugar

controls in India. Freedom of trade in a capitalist world may have its drawbacks and weaknesses—but they are infinitely preferable to a policy of controls as typified in the sugar industry in India.

Cement Industry

It was not till 1912 that we had the real beginnings of the cement industry in India, though as early as 1904 a small factory was established in Madras. The following table shows the progress of the industry since its start:—

Year	Production (in tons)		Production (in tons)
1914	945	1937-38	1,170,000
1916	18,600	1948-49	1,600,000
1918	84,300	1949-50	2,300,000
1925	360,000	1950-51	2,700,000
1930	563,000	1951-52	3,300,000
1935	890,000	1952-53	3,600,000

After the collapse of the boom period in 1924, the infant industry was in a critical period due to internal and foreign competition, aggravated by production being in excess of demand. The question of protection was referred to the Tariff Board in April, 1924, which made certain 'conditional and halting' proposals. The Government, however, declined to accept even these moderate proposals. In order to save the industry, the Indian Cement Manufacturers' Association was formed to restrict supplies and regulate prices, which was a great success. The Cement Marketing Company was formed to regulate sales on a quota basis for the member companies.

The foreign imports of cement in India were 150,000 tons in 1914 which dwindled to 21,000 tons in 1938-39. The progress of the cement industry has been marked by the famous merger into one company (the Associated Cements Co. Ltd. 1936) of a number of concerns. In the boom of 1936-37 several new companies were floated, the biggest among them being the Dalmia Cement Co. Ltd., and this led to severe competition and overproduction. The A.C.C. and the Dalmia group, however, came to a mutual arrangement which prevented further competition. In 1939, there were 19 cement factories in India employing about 11,000 workers. The whole output of the industry was absorbed internally, except for a small amount exported to Ceylon. The outbreak of the second world war led to a complete cessation of imports, and a great

1 The figures from 1948-49 we obtain from Major Industries Annual 1952-53, p. 167. As usual figures of production vary from source to source of information. Owen gives us the following figures of production: 1949, 2,100,000 tons, 1950, 2,600,000 tons, 1951, 3,100,100 tons, (p. 318.) op. cit.

demand for cement for military purposes. The stimulus thus given to the industry resulted not only in the working of the existing factories to full capacity, but also to the establishment of new factories. In 1942 Government assumed control, and fixed prices on a uniform basis for the country as a whole. Ninety per cent of the production was allocated to war purposes and 10 per cent only was released for civilian consumption. Later on, the quota for civilians was increased, as military needs were satisfied. Large quantities were exported in the early years of the war to Malaya, Java and Iran.

In 1947 there were 24 factories in undivided India with a capacity of 2,800,000 tons per annum. Of these 19 with a capacity of 2,300,000 tons are in the Indian Union. There was a decline in production in post-war years to 1,500,000 tons, which led to increased imports reaching 350,000 tons in 1949-50. Since then our production has gone up continuously, with imports declining to 13,000 tons. The target of the Planning Commission is 5,000,000 in 1955-56, when the estimated demand would be 4,500,000 tons giving scope for some exports.

Paper Industry

India possesses the necessary raw material and commands other favourable conditions for the development of a successful paper industry. Indian paper is made from wood pulp, rags and grass. The grass used is either bhabar or sabai grass. Sabai grass is perennial, and grows in dry climate from Chota Nagpur to Nepal. In recent years, bamboo has been increasingly used as a material for paper making, opening up immense possibilities for the Indian paper industry. There are extensive bamboo plantations in the Southern States, in Kanara, in Bombay and in the forests in Assam and Orissa.

The hand made paper industry is an ancient industry in India. Paper production in earlier days had very little chance of standing the competition of foreign imports. The first paper mill was established in 1716 at the Danish Settlement at Tranquibar in Tanjore District by Dr. William Carey, the famous missionary. The Bally Mill was started on the banks of the Hooghly in Bengal in 1867. The Upper India Couper Mill (1879) at Lucknow; the Tittaghar Mill (188) in Bengal, and the Deccan Paper Mill (1887) at Poona. Others soon followed. The war of 1914-18 gave a stimulus to paper manufacture. A new concern called the Naihati Mill was established by the Indian Paper Pulp Co., Ltd., on the banks of the Hooghly in 1918 for the production

of pulp and paper from bamboo. Two more concerns are the Karnatak Paper Mills established in 1927 at Rajamundri for making paper from paddy, straw and bamboo, and the Punjab Paper Mills Co., 1929, for making paper from bhabhar grass. When the Tariff Board was appointed to consider the question of protection to the paper industry in 1931, there were nine mills in India.

The Bamboo Paper Industry (Protection) Act of 1925 gave protection to writing papers and certain classes of printing papers which was renewed and increased on the recommendation of the Tariff Board Enquiry of 1931. As a consequence, the paper and paper pulp industries made good progress. The Indian Paper Mills were not able to produce newsprint which had to be imported from abroad to the tune of 45,000 tons per year during pre-war period. The demand for newsprint has been estimated in 1951 at 60,000 tons. The Nepa Mills is expected to go into production which is estimated at about 27,000 tons.

The following table shows the growth of the paper industry:—[1]

Year		No of Mills	Annual production capacity (tons)	Actual production (tons)
1913	..	5	34,000	27,000
1923	..	6	36,850	26,284
1937	..	10	N.A.	48,531
1944	..	16	103,800	103,784
1949	..	16	110,000	103,195
1951	..	18	158,500	131,915

It has been estimated that the utilisation of bamboos for paper making will enable India to produce ten million tons of pulp per annum. The cost of production of paper made from bamboo is lower than the cost of paper made from imported wood pulp. Paper mills are springing up near centres of bamboo production, that is, at Dalmianagar and Rajamundri. Newsprint or paper for newspapers is made with a high percentage of wood pulp and it is difficult to make wood pulp in India. The paper mills round about Calcutta have to bring their sabai grass from a distance of 500 to 800 miles. But these mills enjoy the advantages of proximity to a market and the presence of coal fields close by. The prospects of utilising electrical energy led to the starting of the Punjab Paper Mills at Saharanpur.

Even though our paper production has increased, we are still importing substantial quantities of packing and wrapping paper from abroad. The value of these amounted to Rs. 84 lakhs

1 *Output*, No. 7, 1953.

in 1937-38 and Rs. 67 lakhs in 1938-39. Similarly, paste board, mill board and card board imports were 31,700 tons valued at Rs. 55 lakhs in 1937-38, whilst in 1938-39 the imports amounted to 27,050 tons valued at Rs. 45 lakhs. The main item of imports has always been printing paper, which was 61,050 tons valued at Rs. 139 lakhs in 1937-38 but declined in 1938-39 to 46,100 tons.[1] The imports of wood pulp used by Indian paper mills were 13,850 tons valued at Rs. 17 lakhs in 1938-39. An active forest research policy can easily make us independent of foreign wood pulp supply, in view of our large forests and suitable climate for the growth of the required type of coniferous trees.

The production of paper during the three years, 1936-39 averaged 54,000 tons per year, whereas the imports averaged 75,000 tons per year during the same period. The impetus given by the war increased the annual production to over 100,000 tons per annum. Our *per capita* consumption of paper is very small in comparison with advanced countries. But with increasing literacy and extension of primary and secondary education, there will be a greater demand for paper. The following table shows the *per capita* consumption in lbs. of a few countries:—

U.S.A. ..	360	Germany ..	77
U.K. ..	154	Egypt ..	7
Sweden ..	85	India ..	1

Thus, there is quite a bright future for the paper industry which can cater for an increasing internal market of 360 millions. A properly planned paper industry can make India self-sufficient, regarding her paper requirements. The Planning Commission fixed the production and consumption targets for 1956 at 312,000 tons and 322,000 tons respectively. It also felt that having regard to the supply of raw material, it would not be wise to allow the present overconcentration in Bengal to continue. It accordingly fixed the following programme:—

Variety of paper	No. of units	New capacity	Location
Writing and printing	10	30,000	Madras, Bombay, Orissa, Punjab, Bihar, Assam, M. Pradesh and Vindhya Pradesh.

1 We reproduce below the latest available figures of imports:

	1950-51		1951-52	
	Quantity (ooo tons)	Value (lakhs of rupees)	Quantity (ooo tons)	Value (lakhs of rupees)
Packing and wrapping ..	7	89	11	253
Printing paper ..	5	70	7	147
Newsprint ..	75	537	50	570
Writing paper ..	4	58	5	126
Other kinds ..	16	194	13	220
Total ..	107	948	86	1,316

Variety of paper	No. of units	New capacity	Location
Wrapping paper:			
Light weight	6	48,000	U.P., Bihar and Bombay.
Heavy weight	2	20,000	Madras and Punjab.
Kraft paper	3	80,000	Bombay, Orissa and Madhya Prasesh.

Looking to the difficulty of raising capital and of securing technical personnel the production target was subsequently lowered to 212,000 tons.[1]

Match Industry

After the establishment of British rule in India the convenience and cheapness of the match stick in lighting fires and in smoking has led to its universal use, replacing the old methods. It has been calculated that about seven match boxes are consumed annually per head. India imported over two crores worth of matches from Japan and Sweden in 1921. All the conditions necessary for the establishment of a match industry are present in India. Taking advantage of the protection afforded to the industry, a gigantic Swedish combine which controls about 70 per cent of the world's demand has now established a number of factories in India and controls about 60 per cent of the total production of matches in India. The following figures show the growth of the industry:—

Year		Gross (millions)	Year		Gross (millions)
1935-36	..	21.15	1940-41	..	23.13
1938-39	..	21.06	1941-42	..	16.52
1939-40	..	21.97			

It is difficult to obtain later figures, but the Planning Commission give us for six months, April-September 1952, 15,300,000 gross boxes and provide for an additional production of 6,200,000 by the year 1956.

The indigenous match industry sought protection against the huge Swedish concern but the Tariff Board of 1926 did not distinguish between the Swedish Trust and the Indian producers with the result that the former being the biggest concern got the greatest benefit of the protection. The Board's proposals actually helped the foreign concern against which the Indian producers had sought help. Today, the Swedish Trust has solidly established itself behind the tariff wall and has been able to dominate the match industry in India. The Western India Match Company is merely the Swedish company under a new name working as an Indian Public Limited Company, with

1 Indian and Pakistan Year Book, 1952-53, p. 182.

a rupee capital. Though it has two Indian directors, the capital and control are entirely foreign. In ten years, about 25 to 30 Indian factories had to be closed down, 17 of them being in Bengal alone, because of the competition from the Swedish Trust. The following table speaks for itself:—[1]

Output in cases of 50 gross				
Year	Swedish	Percent	Indian	Percent
1935	50,860	45	61,311	55
1936	39,113	50½	38,699	49½
1937	58,778	67	28,888	33

The industry at present is not only able to meet the entire requirements of the country, but can afford to export small quantities to other countries. There are at present 200 manufacturing units in the country, but only five of them managed by the Western India Match Co. are mechanised. About 25 are partially mechanised and the rest are cottage factories.

Coal Industry

The Coal mining industry of India goes back to the time of Warren Hastings. The first licence to work coal mines was granted in 1774 but the venture failed. The company had found it "cheaper to carry coal by sailing ships from England around the Cape than to mine and use Indian coal."[2] In 1814, mining was started at Raniganj. The first Geological Survey of coal fields was made in 1845-46. Detailed examination was carried out in 1858 and 1860. There are about 50 collieries now in existence. There has been rapid development since 1868. The coal mining industry in India is one of the basic industries. It employed about 200,000 persons with an output of 28 million tons valued at Rs. 10.64 crores in 1938. India is the seventh among the coal producing countries of the world. Impetus to the industry was given by the railways which consume about one-third of the total output. The Iron and Steel Industry consumes about 15 per cent of the total production per year. Domestic consumption is estimated at about 3.5 million tons which is very low in comparison with the large population. Attempts are made to popularise the use of soft coke as domestic fuel. The following figures show the growth of the industry:—

Year	Tons in thousands	Year	Tons in thousands
1868	500	1920	17,962
1880	1,019	1930	23,803
1890	2,168	1940	25,056
1900	6,119	1942	29,000
1910	12,047	1946	26,000

1 Adarkar, op. cit., p. 293.
2 Buchanan op. cit. p. 255.

After the attainment of Independence coal production in the Indian Union has made further strides as evidenced by the following figures:—

Year		(000 tons)	Year		(000 tons)
1948	.. ..	29,000	1951	.. ..	34,000
1949	.. ..	31,000	1952	.. ..	36,000
1950	.. ..	32,000			

The industry by 1925 was in a critical stage, due to the railways—the principal consumers of coal—owning and working their own collieries, due also to the precarious character of the export trade and the electrification of the suburban railways in Bombay, as well as the increasing use of electricity and oil as power sources by cotton mills in Bombay. The exports of coal had declined from 1,225,000 tons in 1920 to 216,000 tons in 1925. In 1922 only 77,000 tons were exported. The case for protection to the coal industry was referred to the Tariff Board in 1926. which reported against a protective duty on imported coal. The Legislative Assembly and the Minority Report had recommended a countervailing duty on the bounty-fed foreign coal which was a great handicap to the Indian industry. Government, however, rejected this proposal on the ground of possibility of retaliation. Later on, there was considerable expansion in our exports which rose to 727,000 tons in 1929 but fell to 195,000 tons in 1936. Since 1937, there was a rapid increase in exports and there has been a decline in our imports. This increase, was, however, arrested by the exigencies of the war. The following table shows the exports and imports of coal in India:—[1]

	(000 tons)						
	1938-39	1940-41	1942-43	1947	1948	1949	1950
Exports	1,341	1,941	326	935	1,270	903	2,600
Imports	44	5.1	5.4	—	—	—	—

Sixty-two balance sheets of coal companies published from January to November, 1940, showed a total profit of Rs. 105 lakhs against Rs. 102 lakhs in 1939 and Rs. 81 lakhs in 1938, but the wages paid to miners were "ridiculously low." During the war period, the industry as a whole made extremely high profits. In 1929 and in 1933, colliery owners made attempts to fix minimum prices and regulate marketing conditions by a restriction scheme but without success. Lately, some attention has been paid to the question of underground safety and conservation of coal resources. A committee with Mr. Burrows as chairman,

1 Figures prior to 1947 relate to undivided British India.

reported on safety and conservation of coal. It recommended legal measures for conservation of coal and the levying of a cess for adopting sand-stowing. The Minority Report recommended the nationalisation of coal mines on the basis of compensation to the present owners. The recommendations of the committee were embodied in the Coal Mines Rescue Rules. The Coal Mines Safety (Stowing) Act came into force from May, 1939, and a Stowing Board was established in November, 1939, for the collection of cess on coal, for sand-stowing measures. In the beginning, the colliery owners opposed the Committee's recommendations, but the increase in the export position diminished their resistance. The complete removal of women from underground work came into force only from July, 1939.

On the eve of the outbreak of the second world war, Indian coal production amounted to 25 million tons, exports were 1.7 million tons and imports were about 50,000 tons. The home demand was about 21 million tons, and despite enormous potential resources we were not in a position to meet the normal home demand, apart from the expanded demand resulting from war conditions. The shortage of coal was acute in 1942-43. A Commission was appointed to improve production and distribution of coal. It recommended grant of attendance bonus to manual workers from 2 as. to 5 as. per day of attendance, plus half a seer of free rice per day.

In 1943, in spite of public protests, the Government of India allowed women to work underground, the reason given being that there was a shortage of labour. The shortage of coal to meet war requirements, in addition to the normal civilian needs led the Government to concentrate their attention on increased production and to the appointment of a Coal Commissioner for India. The Colliery Control Order was promulgated in May, 1944, for the purpose of launching a comprehensive coal control scheme, regarding output, price, transport and distribution. Government also promulgated the Coal Mines Labour Welfare Fund Ordinance in January, 1944, with the object of constituting a fund for promoting the welfare of coal mining labour. To administer the fund a Coal Labour Advisory Committee including a lady mine worker was appointed, and it recommended to the Government a cess of 4 annas per ton.

Among important reccent developments in the coal industry may be mentioned the broadening of export enquiry due to coal shortage in Europe, loss of Pakistan market, and promulgation

of Coal Mining (Conservation and Safety) Act, 1952, on the recommendations of the Planning Commission to regulate production, distribution and prices. It provides for the establishment of a Coal Board with the Coal Commissioner as Chairman to deal with the problems of the coal industry.

In the principal coal fields, the cash earnings per worker do not exceed Rs. 5 per week for 5 days' work—about Re. 1 per day. The condition of the unskilled workers is still worse. The low wage level prevailing in the industry can largely be attributed to the weak bargaining capacity of the workers and absence of any State regulation for fixing a minimum wage.

Apart from the fact that employers as a whole in this country have failed to recognise their responsibility towards labour, benefits such as provision for old age and disability are being denied to coal miners on the ground that they are migratory in character, and not steady in employment. It is forgotten, however, that though coal mining labour may migrate during certain seasons, the workers return to the same mines year after year and serve for a period of 10 to 15 years. The long distances over which mines are operated, the inadequacy of inspection, the ignorance of workers and the absence of organisation amongst them, have made it easy for employers to flagrantly violate the safeguards provided by the Mines Acts. Neither the Workmen's Compensation Act nor the Maternity Benefits Act are strictly observed, particularly by the smaller employers. The almost total inability of the workers to enforce their rights under the existing legislation would seem to suggest the necessity for a co-ordinated scheme of social insurance to be undertaken and administered by the Central Government.[1]

There are organisations of coal producers, one largely of European concerns called the Indian Mining Association, and the other largely of Indians called the Indian Mining Federation. In 1920, 134 coal companies of the Association produced two-

1 A different point of view has been urged by the mine owners. "The industry acts as a kind of charitable soup kitchen. The colliery worker is entitled to a quantity of free rice for each attendance. Attendance does not necessarily include any work. It can be imagined what the effect of this ruling is in a time of severe food shortage. Many collieries are overwhelmed with an unmanageable influx of hungry labour. A gang of miners much larger than is required will succeed in going down a pit, raise a few tubs between them, and all emerge entitled to free rice each, cash concessions, and what is more, rice at concession rates for their dependents. Similarly, a gang of twenty men will turn up to load a railway wagon which could easily be loaded by four or five. They will be willing to share the fee for loading one wagon between them—because they will all become entitled to a free issue of rice, cash concessions and rice at concession rates for other dependents........The system leads to waste and unfair distribution. The coal industry should not be, and cannot afford to be, the vehicle by which the hungry population is fed. It is the duty of the State to bear the burden." (Major Industries Annual, 1951-52, p. 96.).

thirds of the total output, and even among these, 47 per cent of its members produced 87 per cent of its coal. In recent years, the share of the Indian owners has increased especially after the depression. Th coal mining industry is one of the basic industries. But it has been very inefficiently run under private ownership. The Coal Mining Committee of 1937 observed: "In short, to use a sporting metaphor, the coal trade in India has been rather like a race, in which profit has always come in 'first,' with safety a poor 'second', sound methods 'an also ran', and national welfare 'a dead horse', entered perhaps, but never likely to start." As against the pre-war profit of about 10-14 as per ton, the colliery owners reaped colossal profits ranging up to Rs. 50-60 per ton. The coal shortage held up industrial production. The Indian Coal Field Committee which reported in 1946 felt the need of planned government control over the industry, and recommended the acquisition of mineral rights by the State, with a view to efficient organisation and increased production. The owners were to be compensated at 10 times the present income from royalties. A settled labour force was to be built up, and a National Coal Commission constituted under the Ministry of Fuel and Power for controlling the industry. The Commission discussed the question of nationalisation, and observed: "It is too late in the day to question the theoretical justification for State ownership and operation." Such ownership and operation, they said, may become essential at a future date. It was not in favour of immediate nationalisation, and desired acquisition of mineral rights in the first place. "If situations detrimental to national interests," they went on to observe, "cannot be remedied by control, the State should intervene to acquire and operate the mines. In this category would come unreasonable failure to stow for conservation and obdurate refusal to amalgamate mines." The commission was, obviously, not quite sure about controls being effective. A key industry like coal, cannot be allowed to remain under private ownership, especially in view of its past record even during a period of national emergency.[1] The Planning Commission estimate the additional demand by 1955-56 of the order of about 6 million tons—4 million tons for the industrial development envisaged, 1 million ton for the railways and 1 million ton for additional thermal power generation and

1 "So far as we can see, untrammelled private enterprise which has had a free run for over a century has been tried and found wanting." (Report on Enquiry into Conditions of Labour in Coal-mining Indusry in India by S. R. Deshpande 1946, p. 133.).

other purposes. Judging by recent trends in production this additional demand can be met by the industry according to them.

Leather Industry

India, with one-third of the total cattle population of the world, has the largest number of cattle. India has a total cattle population of 255,000,000, comprising 136,000,000 cows and bulls, 40,000,000 buffaloes, 46,500,000 goats, 37,000,000 sheep and 3,200,000 other animals. It is estimated that about 16 million cattle and 5½ million buffalo hides, 23 million goat and kid skins and 15 million sheep and lamb skins are produced annually. These figures fluctuate, as 70 to 80 per cent of hides are obtained from animals dying a natural death. Still, India is a major supplier of hides and skins, both raw and half-tanned, in the world. The annual value of Indian production of raw hides and skins is estimated at about Rs. 13 crores as against Rs. 6 crores for undivided India.

During the first world war the tanning industry received considerable stimulus, the main cause being army orders. The Munitions Board encouraged the production of various goods hitherto imported from abroad. About 75 per cent of the Indian raw hides and 45 per cent of the goat and sheep skins are locally tanned, the rest being exported. Germany was our principal customer before 1914. After the war, the United Kingdom became the chief buyer, though we exported nearly one-third of our hides and skins to Continental Europe. The exports of raw and undressed hides and skins were valued at Rs. 412 lakhs and half-tanned at Rs. 600 lakhs in 1939-40. Almost the whole of the half-tanned leather was exported to the United Kingdom, which imports more than 50 per cent of our hides and skins.

The indigenous tanning industry, mostly a cottage industry, is carried on by "chamars." The modern tanning industry has been developed in Kanpur, Agra, Calcutta and Madras. In recent years, there has been a great progress in chrome tanning, especially in Kanpur, Calcutta and Madras. In 1950, there were 26 large organised tanneries, 16 producing chrome tanned upper leather.

The Indian Tariff Act of 1894 was amended in 1919 and an export duty of 15 per cent on hides and skins was levied, with a rebate of ten per cent on exports to Empire countries, to prevent the slump in the tanning industry, due to the fall in military demand. The rebate was intended to divert the

exports from Germany to Empire countries. The Fiscal Commission considered the duty objectionable and was of opinion that protection, if at all, should be given through an import duty. The duty was reduced to five per cent, this being solely for revenue purposes and the rebate was abolished in 1923. The Hides Cess Enquiry Committee in 1930 recommended one per cent *ad valorem* cess on the export of raw hides and skins to be used for the improvement of the tanning industry. The five per cent duty on raw hides was abolished in 1934 and that on raw skins in 1935. In order to improve the trade, a reorganisation of hide grading was proposed by the Agricultural Marketing Adviser to the Government of India.

The second world war greatly stimulated the industry and an order for army goods of Rs. 100 lakhs was placed with the Indian Leather Industry by Government. This order was executed at the rate of 125,000 pairs of boots a month. The industry has vast capacity for supplying increased demand. A recent development in this country is the growth of lamb and kid fur skins. About 5,000 pieces were exported in 1928, and by 1936 exports exceeded two million skins. With the large scope for the development of leather and tanning industries in India, we need not remain dependent on exports of hides and skins.[1]

The footwear industry is the most important of leather goods industry. There are nine mechanised units in the country and their total annual output aggregates about 25 million pairs. Besides these the small and cottage units, operated by cobblers, produce 13 million pairs of Western style and 70 million pairs of Indian style footwear. After the establishment of the Bata factories in India the country has not only eliminated foreign competition, but has been able to export Indian made shoes abroad.[2] India with her vast population is potentially one of the largest markets of footwear in the world. Barely 10 per cent of the population today use any kind of footwear, whilst in the U.S.A. and U.K. there is an average consumption of three pairs per person per annum. A Central Leather Research Institute was opened in Madras in January 1953, mainly with a view to the rationalisaion of the tanning industry.

1 Annual exports of raw goat skins which are surplus to present needs of the tanning industry amount to about 17,000,000 pieces worth Rs. 7 crores.

2 The export of footwear increased from 384,000 pairs in 1949-50 to 1,417,000 pairs in 1951-52. (Owen, op. cit., p. 313.)

Glass Industry

Glass vessels and ornaments were manufactured in India in early days. Pliny refers to "Indian glass" of superior quality. The first Indian references to glass are in the Mahavansa, the chronicles of the Sinhalese Kings (306 B.C.) when glass mirrors were carried in processions. According to Sir Alfred Chatterton, glass was an established industry by the 16th century. In the 17th century, enamelled glass was manufactured in India and Belgaum. Mysore and U.P. had glass factories in 17th and 18th centuries.

The industry is mostly a cottage industry, distributed all over the country with chief centres in the Firozabad District of the U.P. and Belgaum District in the South, manufacturing cheap bangles from glass cakes or blocks, obtained from larger factories. It supplied one-third of our demand but was exposed to severe competition from Japanese 'silk bangles.' Now the factory made bangles—a monopoly of Firozabad, have overcome Japanese competition due to their superiority. Today, 80 per cent of the home demand is met by Indian production.

The modern factory industry is yet in its infancy, the first being that started in Talegaon in Poona District, with the help of 'Paisa Fund' and run on non-commercial lines. The impetus of the Swadeshi movement led to the establishment of a number of glass factories on modern lines, but most of them failed, due to inadequate technical skill, ignorance about the qualities of raw materials and lack of proper choice regarding sites, etc. Yet, sixteen new factories were started between 1908-13, only half of which were working at the outbreak of the war in 1914. With the encouragement given by the Munitions Board, during the war period, new factories were started, the estimated capital invested being about Rs. 15 lakhs. The duty on imported glass was increased from 15 to 30 per cent between 1918 to 1932 and this led to the establishment of 22 new factories. In October, 1931, the enquiry into the glass industry was referred to the Indian Tariff Board when there were 59 glass factories. Its report in 1932 recommended protection for ten years and an increase in the duty on foreign imports. But these recommendations were not accepted by the Government of India, and a rebate of duty on imported soda ash was granted which gave some relief to the industry.

The number of factories in operation at the time of the Partition in India was 235 out of which 92 were engaged exclusively in the production of bangles, while the remaining 143 were pro-

ducing other glassware. Only three units were in Pakistan. But later, the Hardeo Glass Factory of Dacca migrated to India. About 5,000 Moslem workers employed in bangle factories in Firozabad left for Pakistan. The raw material situation, particularly in respect of soda ash, was adversely affected as the soda ash plant in Kherwa producing about 20,000 tons was in Pakistan. Recently the production of soda ash in India has increased to the pre-Partition level. Pakistan constituted an important market, as in 1948-49 she imported glassware worth Rs. 45 lakhs, out of which India supplied her with Rs. 15 lakhs worth. The chances of Pakistan developing her glass industry are bright, because of the availability of raw materials like soda ash and glass sand.[1]

The number of registered companies in 1950 was 151 with a fixed capital of nearly Rs. 3 crores. A Central Glass and Ceramic Institute was established in Calcutta in August 1950 for research and technical assistance to the industry. The Five Year Plan fixed targets for broad items of glassware as below:

	1950-51		1955-56	
	Installed capacity in tons	Production in tons	Installed capacity	Production estimated
Hollow ware	201,000	86,000	238,000	137,000 to 142,000
Sheet glass	12,000	5,000	52,000	26,000
Bangles	35,000	16,000	35,000	16,000

Chemical Industry

The manufacture of chemicals is always regarded as a 'key' industry not only from the point of view of defence, but also as an indispensable preliminary for the development of various other industries. It is of vital significance to the industrial economy of the country. The term "heavy chemicals" is applied usually to substances such as the common acids, alkalies, fertilisers, etc., which are the foundation of the entire chemical industry. Their utility is determined by their use of processing the raw materials of other industries manufacturing essential commodities, like textiles, paper, soap, glass and leather.

The first world war gave a stimulus to the manufacture of a number of chemicals as foreign supplies were cut off. India, however, is still mostly dependent upon foreign countries for these supplies. She possesses vast resources but these have not been developed due to severe foreign competition especially from British and German Chemical Combines. The value of imports of

1 Vakil C. N. op. cit., pp. 314-5.

chemicals and chemical products was Rs. 195 lakhs in 1913-14, Rs. 1487 lakhs in 1927-28 and Rs. 1072 lakhs in 1939. The imports of soda compound was 2,086,000 cwts, as compared with 1,074,000 cwts. in 1923-24.

The question of protection to the industry was referred to the Tariff Board in 1928-29. The Board recommended protection in the form of specific duties the claim being based upon the great national importance of the industry. Government passed the Heavy Chemical Industry (Protection) Act in October 1931, after considerable delay, embodying some of the recommendations of the Tariff Board, giving protection for eighteen months only, except in the case of magnesium chloride where the protection was to last till March, 1939. When the Act expired in 1933, the protective duties automatically lapsed, and no further action was taken. Due to the system of "preference with protection", the Imperial Chemicals, Ltd., a foreign concern, was able to secure effective protection against their competitors abroad, very much as the Swedish trust gained at the cost of Indian concern in the match industry, and got a firm footing in our country.

The last war opened up vast opportunities for the development of our chemical industry by the cessation of foreign competition. The constantly increasing demands of local industry have made India self-sufficient in a variety of chemicals, including liquid chlorine, bleaching powder, nitric, hydrochloric and sulphuric acids, magnesium chloride and magnesium sulphate. There is an exportable surplus of calcium and magnesium chloride, sodium and potassium bichromates.

(a) Sulphuric acid: The beginnings of sulphuric acid manufacture date from the end of the 19th century. New plants were established in different parts of the country after 1919. The first plant was established at Jamshedpur by the Tata Iron and Steel Co. The industry made substantial progress during and after the second world war. Today there are 47 plants producing sulphuric acid. Productive capacity increased from 80,000 tons in 1946 to 201,000 in 1951. The actual production in 1951 was about 107,000 tons. The two most important plants are Fertilisers and Chemicals Travancore Ltd., capable of producing 75 tons daily. Imports of sulphuric acid were 3.2 tons only in 1952. For a population of 360,000,000 the *per capita* production and consumption of this chemical is 0.6 lbs. per year, as against 45 lbs. in U.K. and 120 lbs. in U.S.A. The Five Year Plan envisages an output of 230,000 tons by 1955-56.

The sulphuric acid industry has to depend on the supply of sulphur, which has to be imported mainly from the U.S.A. India's annual requirements of sulphur are estimated at 65,000 crude and 2,500 tons refined; the bulk of it, being 46,000 tons, are required by the acid industry. But the allocation of sulphur in 1951 by the International Materials Conference was barely 68 per cent of India's minimum requirements. The possibility of manufacturing sulphur from gypsum, pyrites and coal has been under investigation and two schemes for the production of sulphur from gypsum are being evolved by the Council of Scientific and Industrial Research.

(b) Caustic Soda: The estimated annual demand in the country is placed at 63,000 tons of which the soap industry uses 25,000 tons and the textile industry 15,000 tons. Installed capacity increased from 12,000 tons in 1946 to 25,000 tons in 1951. The Planning Commission estimate that it should reach 33,000 tons by 1956. Actual production today is about 15,000 tons annually. For the bulk of our requirements we have to depend on imports. In 1951-52, we imported 61,800 tons valued at 3.75 crores. The future prospects of the industry, we are told, would depend upon the amount of help Government might be willing to give in the shape of concession on freight, supply of electric power at cheaper rates and removal of the salt cess which is levied at the rate of 2 annas a maund.

(c) Soda Ash (Sodium Carbonate):—Soda ash is used in large quantities by glass, textiles, paper, chemical and soap industries. The installed capacity of the industry today is about 54,000 tons. The actual production increased from 12,000 tons in 1946 to 47,000 tons in 1951. The estimated consumption is about 115,000 tons per year. Under the Five Year Plan consumption is expected to increase to 155,000 tons. In 1951-52, we imported 153,000 tons valued at nearly Rs. 3 crores.

(d) Fertilisers:

In 1943 the Food Grains Policy Committee estimated India's requirements of chemical fertilisers at between 2 and 3 million tons annually. These are of primary importance in India due to the deficiency of nitrogen in the soil. In the past, we used to get our supplies from Britain, U.S.A. and Belgium, spending about Rs. 10 to 12 crores on imports. With the setting up of the Sindri factory, the biggest in Asia, imports are likely to be reduced substantially in the future. In pre-war India, the production of ammonium sulphate and superphosphate was about 11,000 and 2,000

tons respectively per year. Our production of the former reached 47,000 tons in 1950. The production of superphosphates went up to 51,700 tons in 1950. There are at present 14 units with a capacity of 134,000 tons of superphosphates. The Government factory at Sindri started production in 1952 and is capable of producing 350,000 tons annually. Distribution of fertilisers is done through the Phosphate Pool formed in 1949.

In India the major soil deficiencies are nitrogen and phosphorus. Recent estimates indicate that the minimum requirements of chemical fertilisers for application to irrigated lands are of the order of 450,000 tons of synthetic nitrogen, 320,000 tons of phosphates and 37,000 tons of potash fertilisers. The requirement of synthetic nitrogen on a country wide basis shows the need for 2,000,000 tons equivalent to 10,000,000 tons of ammonium sulphate. If 16 million acres of new land are brought under irrigation in the next five years, as the Planning Commission propose, the need will increase. At present only a fraction of this requirement is met by the use of organic manures and artificial fertilisers.[1]

(e) Fine chemicals and drugs: The fine chemical industry in India is still in its infancy. There is considerable production of tinctures, liver extract and shark liver oil, which has largely replaced cod liver oil. Strychnine, calcium lactate, bromides and other drugs are produced, but not in quantities adequate to meet India's requirements. Quinine and quinine salts in State-owned plants in Madras and West Bengal are produced from the bark of cinchona trees. In recent years overseas manufacturers have set up plants where patent medicines are produced from imported and local drugs.

A penicillin plant has been set up in Bombay, and a British firm bottles imported penicillin. The Indian Government has entered into an agreement with W.H.O. and U.N.I.C.E.F. for putting up a plant in Bombay to produce penicillin at the rate of 3600 million mega-units annually to be increased later to 9000 million. It has been stated that India consumes 9 million mega-units of penicillin every year. The Atul Products Limited was established at Bulsar in Bombay in 1952 with the assistance of an American and a Swiss firm for the manufacture of sulpha drugs. An agreement with W.H.O. has been arrived at for the establishment of a D.D.T. plant at Delhi. Production will begin in 1954 with an annual capacity of 700 tons, and with a later capacity of 3000 tons.

1 Synthetic Fertiliser Industry of India, J. C. Ghosh and A. N. Roy (Major Industries of India, Annual 1951-52, pp. 27 *et seq.*)

According to information available the imports of drugs and medicines has been increasing during recent years:

(Imports in lakhs of Rupees)

	1949-50	1950-51	1951-52
Total	786	994	1,515

Exports from the U.K. to India in 1951 included £750,000 worth of penicillin, anti-malarial drugs £304,000 and other description of medicines £1,931,000.[1] Foreign manufacturers have been increasingly taking keen interest in developing the Indian pharmaceutical industry. Already more than six companies started on the basis of Indo-foreign partnership have established factories for the manufacture of sulphadiazine, Squibb's products, Dettol and sulpha drugs.

Machine Tools

India's annual requirements of machine tools amount to Rs. 9 to 10 crores. Machine tool production in the country recorded a marked increase during the last war from 100 machines in 1939 to 8800 machines valued at Rs. 1.75 crores in 1946. The Partition deprived the country of some of its firms, and the existing factories were not adequately equipped. The tools mostly produced in the country are unsuitable for railway workshops and ordnance factories which employ over 16,000 machines of all types. The Government of India in April 1949 entered into an agreement with a Swiss firm, to provide equipment, tools and fixtures and loan technical experts. The factory is to be located near Bangalore, the manufacture of machine tools in five stages to be completed within a period of six years. The factory will produce 1600 machine tools annually. The total cost of the project was initially estimated at Rs. 30 crores, but was subsequently brought down to Rs. 11.5 crores spread over a period of four years.

Trend in Industrial Growth

When we take a general view of the growth of industries in our country, we have to take note of the fact that whilst we have made definite progress in the production of alloy and special steels, the separation of Burma led to the loss of all the mines, producing the non-ferrous metals like copper, lead, zinc, tungsten and tin. The progress in our metal industry, though significant as a beginning, is extremely inadequate, if rapid industrialisation is our goal. We need, as a beginning, an accurate appraisal of our resources, and geo-physical investigation and statistical control in assessment and mining. In the next place, our electrical develop-

1 Owen, op. cit. pp. 279-280.

ment tends to run ahead of our industrial development. The progress of our projects will be threatened, if we are to be dependent on foreign sources for the supply of all kinds of electrical equipment. Our foreign exchange position will also be affected.

In the third place, rapid industrialisation in the sense of large-scale production on a basis of private enterprise, may aggravate our difficulties arising from an abundance of manpower—giving rise to greater unemployment, instead of solving our unemployment problem. Fourthly, apart from the difficulties of obtaining the needed raw material and machinery from abroad for replacement and expansion, the short-sighted policy of our industrialists in the past which scattered and frittered away the gains of war times in payment of dividends and the anti-social activities of many of them have damped public co-operation and enthusiasm and strengthened the growing sentiment of those who look to nationalisation as the solvent of our economic difficulties. Finally, even those who believe in the creed of nationalisation have their faith shaken by the willingness of the powers that be to invite foreign capital on a partnership basis and by the growing evidence of a lack of sense of civic responsibility on the part of those who are in charge of the machinery of administration.

CHAPTER XX

INDUSTRIAL LABOUR

In the early days in India the cultivators in the villages often cultivated their lands with hired labour. Part of this labour was supplied by a class of people who were more or less attached to the landlord, and worked in exchange for free land for cultivation. Others were temporarily hired. On the other hand, there was no demand for industrial labour in the villages. Cottage industries and crafts were carried on by the hereditary artisans and craftsmen. With the decline of handicrafts, the craftsmen fell back on the land. It was not till the middle of the last century that labour in organised industry first came into vogue chiefly in connection with the Public Works Department, which undertook schemes for the construction of roads, railways and public buildings. A little later mines began to be developed and in the second half of the last century, the establishment of plantations and factories attracted industrial workers from different parts of the country. Following the census returns we reproduce a table showing the total number of people dependent on industries from 1901-1951:—

	1901	1911	1921	1931	1951
No. in millions ..	34.29	34.24	33.16	32.90	38

It is obvious from these figures that the population dependent upon industry diminished by 1.5 per cent in 1911 as compared with 1901 and by a further 3.2 per cent in 1921 as compared with 1911. In 1931, there was a further fall of 3.8 per cent. The 1951 Census shows, however, a rise in the numbers dependent on industries. As the basis of classification is frequently altered, it is difficult to generalise as to the factors determining the growth in numbers. According to the Census of 1921, the total number of workers in factories which employed 20 persons or more was 2.6 million. In 1931, no general return was obtained from industrial undertakings employing labour. According to the Census of 1931, about 42 per cent of the population were gainfully employed, out of which about one third were employed in industry, commerce, etc. Similar figures for 1941 and 1951 are not available.

Factories

The following table shows the growth of organised industries:[1]

Year	No. of factories	Average daily no. of operatives	Year	No. of factories	Average daily no. of operatives
1894	815	349,810	1946	14,205	2,314,587
1914	2,936	950,973	1947	14,576	2,274,689
1918	3,436	1,122,922	1948	15,906	2,360,201
1939	10,466	1,751,137	1949	19,829	2,433,966
1944	14,071	2,522,753	1950	27,754	2,504,399
1945	14,761	2,642,949	1951	—	2,536,970

It may be pointed out that these figures are not strictly comparable, as the definition of factory was changed from time to time under different Factory Acts, and also because existing factories may have employed large numbers. Moreover, information incorporated regarding former Native States is not complete in a number of cases.

We reproduce below an analysis of workers employed in factories of different types:[2]

	Number of Workers employed (000)				
	1939	1945	1947	1948	1949
Textiles	819	1,014	1,008	1,033	1,047
Engineering	160	315	357	381	370
Minerals and metals	55	125	89	101	109
Food, drink and tobacco	248	310	303	319	348

1 From 1947 onwards figures relate to the former Provinces of the Indian Union, while the previous ones relate to pre-Partition British India. Figures for 1894 to 1918 include Burma.

2 Indian Labour Year Books for 1946, 1948-49 and 1949-50.

	Number of Workers employed (000)				
	1939	1945	1947	1948	1949
Chemicals, dyes, etc.	58	101	95	113	120
Paper and Printing	57	72	78	80	85
Wood, Stones and Glass	53	107	94	98	105
Skins and hides	13	36	29	27	29
Gins and Presses	163	129	83	79	74
Ordnance Factories	31	186	78	74	84
Miscellaneous	94	247	53	54	62

This table reveals the development in industries during the war period and subsequent years. In one decade, 1939-49, there has been a meagre addition of 700,000 roughly in the total number of industrial workers.

Mines

The following table gives us the number of mine workers in selected years:—[1]

Year	Mines subject to Mining Act	Workers underground	Open working	Surface	Total
1901	542	70,129	—	34,531	104,660
1924	1,804	167,719		90,498	258,217
1933	1,424	112,355	41,587	52,565	206,507
1939	1,864	146,827	76,559	81,858	305,244
1945	2,151	159,796	95,310	131,184	386,290
1947	1,976	151,200	103,295	152,768	407,263
1948	1,897	157,386	93,050	145,429	395,865
1949	2,032	166,906	101,229	153,024	421,159
1950	2,085	190,320	114,861	166,580	471,761

It would appear that the relatively larger fall in the number of mines as compared with that of workers in 1933 was due to the closing down of the smaller and more unprofitable mines.

The following table shows the age and sex distribution of workers in mines:—[2]

	Men		Women		Children	
Year	Number	Percent of total	Number	Percent of total	Number	Percent of total
1901	69,025	65.9	30,438	29.2	5,147	4.9
1924	164,402	63.7	87,434	33.8	6,381	2.5
1933	171,038	82.8	35,469	17.2		
1939	254,898	84.0	50,346	16.0		
1945	291,312	76.0	94,978	24.0		
1947	316,013	78.0	91,250	22.0		
1948	314,363	80.0	81,502	20.0		
1949	335,989	80.0	85,170	20.0		
1950	375,255	80.0	96,506	20.0		

1 Geneva Report on Industrial Labour in India, p. 50. Figures from 1939 onwards have been added from Indian Labour Book, 1950-51. The figures before 1947 refer to pre-Partition British India, and since 1947, to A States and Ajmer. 1950 figures cover in addition, coal mines in certain B States and the diamond mines in Vindhya Pradesh.

2 Geneva Report, *ibid.*, p. 52. Figures from 1939 onwards are calculated from the Indian Labour Year Book, 1950-51, Table VII, p. 8.

The number employed in mines in former Native States as given by the Director of Geological Survey of India was 39,162 in 1945. It fell to 29,662 in 1948 (Indian Labour Year Book, 1949-50, p. 10).

Indian legislation now prohibits the employment of children entirely in the mines. In 1945, the total number of women employed was 94,978; and out of them 22,517 women worked underground, which fell to 10,781 and since then, employment of women underground has been prohibited. The increase in the total number of women workers in mines may be attributed to certain beneficial mining legislation and the need for supplementing family income.

Plantation Labour

The number of workers on all kinds of plantations was 741,000 in 1911 and one million in 1921. In 1931, the census returns do not give us the total number of workers in plantations. The report on Industrial Labour in India, however, estimates the number in 1931 at 1,900,000 including planters, managers etc. The three principal plantation industries are tea, coffee and rubber estates which employ about 1,211,000 workers, 986,000 in tea, 177,000 in coffee and about 48,000 in rubber estates. In tea plantations the bulk of labour force is settled on the estates, while in coffee plantations a majority come from surrounding villages. In rubber estates also about half the number come to work from outside the estates. The table below gives us details about the acreage and daily number of employees for the year 1949:

	Number of Estates	Acreage	Average number of workers employed
Tea	6,751	2,392,434	985,616
Coffee (year ending June 1949)	10,218	386,025	177,297
Rubber	15,443	231,104	48,051

Information regarding the age-sex distribution of plantation labour is only available for Assam. In 1949-50 the average daily number of men, women and children workers was 215,412, 174,694 and 59,929 respectively.[1] Since 1948 children under 12 years of age are not to be employed on plantations.

Communications

According to the census of 1931 transport industries included postal, telegraph and telephone services, and the number of persons in British India occupied in such services was 1,724,000 men and 110,000 women. The census of 1951 gives us 5,620,128 as transport workers, but as the classification is based on the nature of work, workers employed in railway workshops and those employed in constructional services are not included in this figure. In 1950-51, railway workers are estimated at 923,154. Employ-

1 Indian Labour Year Book, 1950-51, pp. 12-13.

ment in Posts and Telegraphs is estimated at 193,203 in March 1951, while the Tramways employed 17,740 workers in September, 1951.

Labour Supply—Agricultural Bias

Looking to the large population dependent on the soil which includes landless labourers who scarcely find employment for six months in the year, it might have been inferred that India would have an abundant supply of industrial labour whenever it was in demand. But for a long time, even as late as 1919, industry was faced with a shortage of labour which sometimes became acute, as during the plague of 1896, and the influenza epidemic of 1918. To-day, there is no likelihood of any shortage of industrial labour. The rapid growth of population, the development of communications and the improvement in the conditions of work are factors which will ensure steady additions to the labour force in response to the growing needs of the industry.

The difficulties for recruiting labour in the early days were keenly felt in industries like the Assam Tea Gardens and the coal mines of Bengal and Bihar. A Labour Enquiry Commission appointed by the Government of India in 1896 was followed by a further enquiry in 1905. The latter reported that "proper steps had not been taken to obtain the ample supply that would otherwise have been readily obtainable."[1] It was pointed out that the places where labour was engaged were not known to the workers and that there was lack of concerted action on the part of employers.

The method of obtaining labour for plantations is characterised by the employment of intermediaries. Recruiting is done through men who receive from the planters loans free of interest from which advances are made to recruits and expenses of travelling to the plantations are paid. These advances are subsequently recovered during the period of employment. The workers in the Assam tea gardens were first employed under long term penal sanction contracts. Subsequenty this indenture system was abolished, and was replaced by a system under which 'sardars,' who had to be *bona fide* workers on the plantations, recruited labour in their own villages. The Tea Districts Emigrant Labour Act of 1932 enabled workers who did not require any material help for their journey to proceed freely to Assam.

1 Report on Labour in Bengal, 1906, pp. 29 and 67.

Factories all over the country derive their labour supply in various ways. Small centres generally recruit labour from local sources except when special skill is required. Larger centres usually recruit labour from surrounding districts. The bulk of labourers for centres like Jamshedpur, Bombay and Calcutta is drawn from distant regions. The system of recruiting labour for factories also varies in different places. Local workers, mostly unskilled, present themselves at the factory gates and are appointed on the spot. A common system of recruiting is through intermediaries both men and women called jobbers, mukadams, or maistries. On this question the Royal Commission on Labour observed: "When the shortage was acute the employer had to send into the highways and byways to obtain workers. Overseers, labour contractors and others stimulated thereto by promises of commissions journeyed to distant villages and brought back recruits to the mills, paying their fares and expenses to the city. Such methods are still employed for many industries, particularly plantation, mining etc.; but now the great majority of managers of perennial factories need go no further than their own gate to obtain the workers they require—unfortunately the removal of the market for labour from the village to the factory gate has not generally meant the assumption by the employer of direct responsibility for the engagement of his own workers. This duty is still left largely to intermediaries and especially to jobbers."[1] Labour, however, can never get a fair deal under a system of recruitment through contractors.

As the Royal Commission on Labour pointed out, industrial labour has always been recruited from agricultural areas, sometimes from areas at long distances from factories. The emigrants from the rural areas to the factories continue to regard the place from which they have come as their home. The majority of the factory workers are at heart villagers. They have had village upbringing, they have village traditions, and they retain some contact with villages. Some workers may have a direct interest in agriculture; more have indirect interests as members of a joint family who have agricultural holdings. "A larger number still have a home and members of their own family in the village." The Labour Commission pointed out that in most cases the workers have been born in the villages, that many of them leave their wives in the country, that generally their childhood is spent in the villages. After industrial employment has commenced, the

1 Report of the Royal Commission on Labour in India, pp. 22-23.

worker returns to the village as often as he can, sometimes because he may assist in agricultural operations in the busy seasons, sometimes because the strain of work in the city needs to be relieved by a holiday in the country. We have not yet developed a true industrial proletariat in India.

Causes and Effects of Migration

The main cause which compels the villagers to seek employment in the town is the difficulty of finding an adequate livelihood in the village. There is a substantial class of landless labourers whose numbers are increasing, and who are compelled to seek work in towns. Moreover, there are always large areas where periodic failure of rains or floods make living precarious. The opening up of communications with towns facilitates migration. The village artisans and craftsmen find it increasingly difficult to stand the competition of factories, and an easy way out of the difficulty is for these hand workers to seek employment in factories. Finally, the desire to escape from social disabilities and caste bondage which are more rigid in the villages than in the industrial centres creates a growing flow of labour to the cities. The social amenities of city life and the lure of freedom from caste bondage which cities offer attract men from the villages to the towns not only in the West but in the East as well.

The Labour Commission observed that industrial workers in India are not "pulled" so much as they are "pushed" to the city. If they could secure sufficient food and clothing in the village, few of them would stick to industry. Moreover, Indian life is community life, and the individualistic existence inseparable from city conditions is strange and unattractive to the villager. When we turn from the causes to the effects of migration, these effects can be traced in many aspects of industrial life. The health of the worker is subjected to severe strain. With a change in climate the worker has to face a change in diet. Valuable elements of his diet have to be reduced in the town. Sickness and disease are additional dangers. City life brings new temptations to men who are married but most of whom live by themselves in the town. Alcohol and gambling are additional temptations. The worker used to spasmodic work with long intervals of leisure cannot readily reconcile himself to the continuous work and rigid discipline of a factory. This leads to absenteeism and frequent changes from one job to another.

The constant change in labour force, or labour turnover, carries with it serious disadvantages to the employer. A loss of

efficiency results from the continuous inflow of labour new to the factory and its machines. It also involves an obstacle in the way of establishing contact between employer and employed.

On the other hand, the system of migration ensures to the worker a better standard of health and the combination of urban and rural life brings a width of outlook which is apt to be lacking in a purely urban population. The village provides a home and a refuge in times of sickness, strikes, and unemployment as well as old age. Further, the industrial worker who assists the village by diminishing the pressure on the soil brings to it on his return a new education; he brings to the village his knowledge of the wider world, and a new conception of liberty and independence. The Royal Commission on Labour observed: "Our considered opinion is that, in present circumstances, the link with the village is a distinct asset, and that the general aim should be, not to undermine it, but to encourage it and as far as possible to regularise it."[1] This could be done by providing a certain number of holidays with pay every year, a sort of privilege leave such as is common in the professions. Recently the Government of India have introduced a system of holidays with pay.

The Rege Committee, however, take a somewhat different view and maintain that the village nexus need not be encouraged, as most of the workers are landless labourers, and have no stake in agriculture. They might go to their villages for relaxation and rest for short periods. The remedy the Committee suggest is the improvement of conditions in industrial towns, as regards work in factories, housing, wages and nutrition, and to provide measures of social security for the workers.[2]

Efficiency of Indian Labour

The opinion is generally expressed that Indian industrial labour is less efficient than the labour of other countries. Thus Sir H. P. Mody stated in his evidence before the Labour Commission, "In Japan a weaver minds four looms, and efficiency there is 95 per cent. In China a weaver minds four looms, and efficiency there is 80 per cent. In Bombay a weaver minds two looms and efficiency is 80 per cent. Calculated on the basis of Japan and China a weaver in Bombay is paid 200 and 300 per cent. more than a weaver in China and Japan." Dr. Gilbert Slater observes that the difference of output is due rather to the cheapness of the

1 Report, p. 20.
2 Report of the Labour Investigation Committee, 1946, p. 78.

Indian worker as compared with the British worker than to any inefficiency in the Indian worker. "In Lancashire it is worth while to put only one worker to four looms because you save three workers' wages. But in India the wages are so small that it is not worth while to save that amount at the expense of running the looms at a lower speed, and so the real diffierence between the efficiency of a Lancashire and a Madras operative is very much overstated." On the other hand, we have Sir Thomas Holland bearing testimony to the superior efficiency of the Indian worker. "With Indian labour you can tackle any industry for which the country is suitable. I have seen labourers at Jamshedpur, who only a few years ago were in the jungles of the Santals without any education. They were now handling red hot steel bars, turning out rails, wheels and angles of iron as efficiently as you can get it done by an English labourer."[1]

It has to be remembered, however, that efficiency depends upon a complex of factors and totality of environment. The environment of the workers and life in general differ from country to country resulting in differences of efficiency. Quantitative measurements, or comparisons of efficiency, are apt to be misleading, but there is little doubt that the efficiency of industrial labour in India is low, as evidenced by its low earnings.

We need not add that the efficiency of labour, in all these pronouncements we have referred to, is judged by the criterion of maximum production, and on the assumption that the labourer is worth only what the employer can get out of him. If the efficiency of labour is to be determined, on the other hand, not by the external measure of output or by the measure of somebody else's profit but by what labour under proper conditions may do towards the creation of a material and social environment, favourable to the realisation of a good life for the members of society, our outlook on the comparative efficiency of Indian labour will radically change. For, as even the orthodox economists have now come to realise, labour is not only an instrument of production; it has its own human and social worth, so that no economic progress is worth the name which does not raise the standard of comfort.

1 The Grady Mission found that "Indian workers earning 65 cents a day in poorly lighted factories were turning out excellent machine tools, that in the Firestone plant in Bombay Indian workers were turning out as much per man as in the Firestone plant in Detroit, and that productivity per man in the Tata Steel Works at Jamshedpur was as high as the productivity of American workers in similar mills in Pittsburg." (Michael Straight, "Make This the Last War." 1943, p. 132).

Efficiency and Environment: Working Conditions in Factories

It is a truism that the efficiency of the worker depends among other things on the health and safety of the workers. Health conditions include the sanitary conditions in which the workers carry on their work and the conditions in which they live. The Factory Act of 1934 provided that the factories shall be kept clean and free from effusion arising from any drain, privy or other nuisance and also from impurities of gas, vapour, dust, excessive humidity and overcrowding. It also provided that the factory should have a suitable and sufficient supply of drinking water,[1] sufficient light and ventilation and a sanitary and adequate latrine system. The importance of controlling temperature in factories has long been realised. In 1925, the Government of India proposed legislation requiring the adoption of measures for reducing the temperature. But the legislation was postponed on account of the opposition of employers. Since then, some factories have installed cooling plants for humidification, and also for the health and comfort of the workers. The Act of 1934 granted power to the Local Governments to make rules prescribing standards for cooling. With regard to the control of dust in seasonal factories like cotton ginning factories, the Local Governments refrained from enforcing the necessary rules for fear that the industries might be attracted to neighbouring Princely States. Regarding dust in tea factories and rice mills, the Labour Commission recommended compulsory instalment of dust attracting machinery, and also that new factories should not be allowed to be built without it. Some States have already made the necessary rules whilst others have postponed action.[2]

The International Labour Office Report on Industrial Labour in India observed that sanitary conditions were particularly unsatisfactory in non-regulated factories. "There is for instance a marked absence of adequate sanitary arrangements. In such industries as the manufacture of shellac which is carried on in unsatisfactory buildings with leaking roofs, earth floors and poor lighting and ventilation, there is an almost universal absence of washing and sanitary arrangements. There is a simi-

1 Cf. Rege Committee Report: "Most of the factories make some sort of provision for drinking water, but the arrangements are neither uniform nor always satisfactory" (p. 158). "There is a great necessity for making statutory rules regarding storage and cleanliness of the water room and making the provision of cool water compulsory." (p. 159).

2 "In regard to working conditions most of the employers rarely do more than what they are forced to do by laws and even this is evaded in several cases." (Rege Committee Report, p. 144).

lar lack of sanitary arrangements and drainage in tanneries where there are pools of filthy water and the earthen floors are littered with evil smelling refuse."[1] After a decade the Rege Committee noticed no improvement. "The upkeep of latrines is most unsatisfactory. They are neither white washed nor tarred in several industrial concerns."[2]

Safety and Accidents

The Factory Act of 1934 provided that every exposed part of a prime mover, every hoist or lift and every part of the machinery which the Local Government might prescribe must be adequately fenced. The Act also required provision of means of escape in case of fire, and for the protection from danger of persons employed in attending to the machinery in any factory. In these matters inspectors could serve orders on the management specifying the measures to be taken to remedy defects.

The need for improvements in safety arrangements is most urgent in the case of seasonal factories. Many of the buildings are structurally defective. Moreover, in cotton ginning factories there is always danger to workers on account of the number of belts and pulleys connecting the main line shaft, and the confined space in which the operator has to work.

Further the Act of 1934 gave power to make rules prohibiting or restricting the employment of women and children upon any operation in a factory that involves risk of bodily injury, poisoning or disease. The 1948 Act has made statutory provisions relating to safety at work and prevention of accidents. It has prescribed in detail the precautions to be taken for ensuring safety of the workers. This removes the possibility of diversity in standards prescribed by different States under the old Act. The responsibility for the safety of workers is placed entirely on the occupier of the factory.

Similarly, the Mines Act of 1923 empowered the Governor-General-in-Council to make regulations providing for the safety of mine workers, the means of entry to and exit from mines, the number of shafts, the fencing of shafts, pits and outlets, the setting and maintenance of pillars, the use of safety lamps etc. The Royal Commission on Labour found that the regulation of safety in mines was in advance of the regulation of conditions of labour, partly because the inspectors were occupied with safety measures under the Act of 1923. A new mines Act, passed in

1 P. 189.
2 P. 158.

1952, reduces the hours of work to 48 per week, strengthens the provisions with regard to health and safety, and provides for the appointment of certifying surgeons to look after arrangements for latrines, urinals, first aid, etc.

Factory accidents in India include accidents of all kinds that occur to workers during hours of work, whether they are connected with the risk of employment or otherwise. The following table shows the growth of accidents in India :—[1]

	Reported Factory Accidents			
Year	Fatal	Serious	Minor	Total
1892	31	318	1,020	1,369
1912	122	1,019	3,367	4,508
1939	221	5,837	29,948	36,006
1943	361	10,016	48,799	59,176
1946	252	8,423	48,460	57,135
1947	214	8,675	49,892	58,781
1948	259	9,132	58,673	68,064
1949	250	8,702	66,664	75,616

Statistics about the causes of accidents are not readily available, nor is there a uniform method of collecting them in all the States. The figures quoted reveal an increase of accident rate of nearly 450 per cent between 1892 and 1943, an increase probably unprecedented in the history of capitalism. The number of accidents had nearly doubled during the war period. The increase may be due to improvement in the methods of reporting accidents. The speeding up of the workers has not been associated with corresponding proper training in the handling of complex machinery. The employers may also have neglected their elementary duty of installing proper safety devices. But taking all things into account, as Dr. Kuczynski observes, "the fact remains that no country in the whole world shows such a rapid increase of the number of accidents as India."[2]

Hours of Work: Hours in Factories

One of the worst features of factory work in every country has been the long hours of work. India has been no exception. In the cotton and gin presses even as late as 1908, a factory inspector observed that the usual day in gins was 14 to 15 and sometimes 18 hours. Mr. R. F. Wadia, a manager of a gin press in the course of his evidence before the Bombay Factory Labour Commission of 1885 stated, "In ordinary seasons that is, when

1 Geneva Report, p. 199. Figures prior to 1947 relate to undivided India. Figures for 1939-49 are from the Statistical Abstracts.

2 "A Short History of Labour Conditions in Great Britain and the Empire," London, 1942, p. 130. The remark of Prof. Adarkar regarding the figures of accidents in Indian factories is pertinent: "A preponderant number of accidents is neither brought to light nor compensated." Report on Health Insurance for Industrial Workers, 1944, p. 215.

work is not very pressing, the engine starts between 4 and 5 a.m. and stops at 7, 8 or 9 p.m. The hands work continuously all these hours and are relieved by one another for meals. In busy season the gins and presses sometimes work both night and day with half an hour's rest in the evening. The same set continues working day and night for about 8 days, and when it is impossible to go on longer, other sets of hands are procured from Bombay....Both the men and women come to the factories at 3 a.m. as they have no idea of the time. I have 40 gins in one of my factories at Pachora, and I have only 40 women attending these 40 gins. I have only 8 spare women. I never allow these women off the gins. I am not alone in this respect; it is the general system." So also another witness Mr. Drewett: "The ginning season lasts about 8 months, about 5 of which the hands work 5 a.m. to 10 p.m. and the remaining 3 months they work day and night. The hands are mostly women. The gins and presses never stop for meals; as a rule the hands take their meals at the gins and he has often seen them taking their food and supplying the gins at the same time. He has often seen them supplying the gins thus mechanically three parts asleep, and a child at the breast sucking one minute and throwing cotton in the machine the next. They go on working day and night until they are completely worked out."[1]

The practice in earlier days was regulated by a contract system of employment. The factory owner paid to a labour contractor so much per bale of cotton ginned for furnishing all the labour, except his mechanical staff. The labour contractor had no concern for the work as a whole, and the factory owner none for the workers. "The factory owner seeks the lowest possible labour cost, and some coolie driver provides whatever workers can be mustered at the lowest possible wage and then drives them more cruelly than any tax farmer ever harried the poor."[2]

In the cotton and jute factories long hours were common. With the introduction of electric lighting winter hours were lengthened, a fifteen hour day was the usual practice. In 1908, the agents of two mills reported that for seven out of the preceding ten years they had worked 15 hours per day for an average of 305 days per year.

The demand for shorter hours of work came from the work-

1 Quoted by Buchanan, op. cit., pp. 304-305.
2 *Ibid.*, p. 306.

ers themselves. The Factories Act of 1911 for the first time limited the working hours of men to 12 a day. The Act of 1922 further limited the hours to 60 a week and 11 a day in all factories. The Act of 1934 reduced the hours to 54 a week and 10 a day in all perennial factories. After the passing of the Act of 1934 the number of hours in cotton mills in Bombay and other centres were reduced to 9 a day, and the mills generally worked for 6 days in the week. The Act of 1934 was amended several times since its enactment and was finally replaced by a new Act in 1948, which reduced the maximum weekly and daily hours of work to 48 and 9 respectively, with a spreadover of 10½ hours in a day. The hours of children and adolescents have been reduced from 5 to 4½ hours. The Act came into force from 1st April, 1949.

The hours of work in jute mills are now regulated by the Indian Jute Mills Association within the limits laid down by law. The practice is to limit the working to four or five days a week. When the jute mills were subjected to restrictions regarding hours of work, they used the same devices that British cotton manufacturers employed a hundred years ago—namely, the multiple shift system which makes the control of working hours of an indvidual impossible. Till 1931 the jute mills were divided into single shift and multiple shift mills. All the mills opened at 5-30 a.m. and closed at 7 p.m. In the single shift mills work was stopped for 2½ hours at noon. The multiple shift mills worked 13½ hours continuously, on a system of overlapping multiple shift. The Labour Commission found various objections to the multiple shift system. Supervision was extremely difficult and a number of workers shown in the registers had no existence in fact. Non-existent workers were credited with pay which was divided between the clerk, jobbers and men who did extra work. The proportion of such "dummies" was estimated at 7½ to 10 per cent of the total. This practice not only lengthened daily hours beyond the legal limit in the case of adult workers, but also in the case of children who were found to be working 12 hours a day in some mills. The Royal Commission, therefore, recommended that the Provincial Governments should have power to control the overlapping shift system.[1]

Hours in Mines and Railways

There was no restriction on hours of labour in mines by

1 Report, pp. 48-51.

legislation till 1923. In that year a New Mines Act was passed limiting the weekly hours to 60 above ground and 54 underground. There was no limitation of daily hours of work, and workers often remained underground for 16 and 17 hours at a stretch. An Act of 1928 provided that no mine shall remain open for more than 12 hours in any consecutive period of 24 hours unless work was organised in shifts not exceeding 12 hours. Finally the Act of 1935, reduced weekly hours to 54 for work above ground and daily hours to 10 for work above ground and 9 below ground.

As in the case of men, so in the case of women working in mines, there were no legal restrictions till 1923 when the maximum hours for surface work was fixed at 60 and underground work at 54 hours. The Government issued regulations in March, 1929, to exclude by stages women from underground work and from October, 1937, the exclusion became absolute.[1] The new Mines Act, 1952 enforced from 1st July, 1952, brings the mine workers in line with factory workers. The hours of work are reduced to 48 per week for both surface and underground workers, and no worker can be allowed to work for more than 9 hours a day above ground and 8 hours a day underground.

The railway workers fall into two groups: (a) Those employed in workshops who are covered by the Factories Act and (b) those who are employed under the Railways Act. In 1935-36, about 475,000 or 70 per cent came under the Railways Act. The normal hours of work were 48 in a week of 5½ days in 1930. In the larger locomotive sheds a three shift system of 8 hours each was worked. Mechanical staff worked 8 hours a day. In the engineering department, the hours were 8 to 9 a day and from 48 to 58 a week. At the large stations a three shift system was adopted. At smaller stations where the work was intermittent hours were generally 9 to 12. With regard to running staff, a large number worked within the 60 hour limit but in some cases drivers, firemen and guards worked upto 80 hours a week or longer.[2]

The Railways Amendment Act of 1930 provided that railway servants might not be employed for more than 60 hours a week on an average in any month. The Royal Commission on Labour recommended that the case of all the individual branches

1 During the war period, however, the Government of India had suspended the rule prohibiting employment of women underground, the reason given being an inadequate supply of labour for coal mines.

2 Report of the Royal Commission of Labour, pp. 156-57.

should be examined by the Railway Board with a view to determining to what extent the prevailing hours of work could be reduced. The hours of work are now fixed in accordance with the award of the Adjudicator, Justice G. S. Rajadhyaksha, according to the category of workers (1) intensive involving continuous concentration or hard labour, (2) continuous, (3) essentially intermittent, those whose daily duty hours include periods of inaction and (4) excluded, whose employment is of a light character, e.g., saloon attendants and gate keepers of "C" class level crossings. For category (1) the hours of work were fixed at 45 per week, for (2) 54 hours, for (3) 75. For (4) no limit was prescribed, but no unreasonable conditions were to be imposed. For categories (1) and (2) 30 consecutive hours of periodic rest every week were recommended, for category (3) 24 hours including a full night, and for (4) 48 hours in a month.

Intervals and Days of Rest

The Factories Act of 1911 provided that if children worked for more than 5½ hours half an hour's rest was to be given after not more than 4 hours work. The Act of 1934 permitted children to work for only 5 hours a day. For women, the Act of 1891 provided a rest period of one hour and a half for every 11 hours of work. This was found inconvenient as it was not long enough to allow women to go home and return and too long for the purposes of rest in the factory. By the Act of 1911 the rest period was reduced to half an hour, the same as for men.

With regard to adult men, the Act of 1891 provided for stoppage of work, for half an hour between 12 noon and 2 p.m. The Act of 1911 made this stoppage compulsory at the end of every 6 hours. The Act of 1922 raised the duration of the rest to one hour, which might be divided into two periods of half an hour each. The Act of 1926 made it possible at the request of workers to limit the period to one half hour for persons employed for not more than 8½ hours. Under the Act of 1934, no adult worker might work (a) more than six hours without having one hour's interval of rest, or (b) more than five hours without half an hour's interval of rest or (c) more than 8½ hours without having an interval of rest of two half hours.

All workers whose conditions of work are regulated by laws enjoy a weekly day of rest. The Act of 1881 provided for weekly holidays for children. The Act of 1891 provided that

no woman should work more than 6 days continuously without a day of rest. The Act of 1911 granted weekly holiday for all workers and the Act of 1922 added the proviso that no person should be employed for more than 10 consecutive days without a holiday for one whole day.

In the early days of the factory system, it was believed that the longer the hours of work, the greater the output. The employers were, therefore, always anxious to prolong the working day. Later, it was realised that on humanitarian as well as economic grounds a shorter working day would be justifiable. In most countries, an eight-hour day is considered the optimum limit. In a country like ours with its hot climate, there is, on broad humanitarian grounds, a case for even a shorter working day. By an amendment of the Factories Act in 1946 the hours of work have been reduced to 48 a week in perennial and 56 a week in seasonal factories, with pay for overtime at double the normal rates. The investigations of the Labour Department of the Government of India carried out in 1945 revealed that already in the engineering, iron ore and cotton ginning industries, as well as in ports a 48 hour week was in force for about 947,000 workers.[1]

Social Insurance

In a country like India where industrialism is in its infancy, it is natural that no attempt should have been made hitherto to introduce any modern system of social insurance against such risks as unemployment, sickness, old age, widowhood, and orphanage. In early days the joint family organisation afforded to the individual a social insurance scheme, giving him security against all such risks. The transfer of economic responsibility from the joint family to the individual has brought insecurity with it, most of all to the workers who have scarcely any property of their own. The Labour Commission did not consider unemployment insurance feasible, under the then existing conditions in India. With regard to sickness insurance, the Commission observed that methods should be explored that may lead to alleviating hardships and recommended for examination, "a tentative scheme based on separate medical provision, possibly by Government, and financial benefits in the form of paid sick leave given through employers on the basis of contributions by themselves and by the workers."[2]

1 P. P. Pallai, "Labour in South East Asia," p. 20.
2 Report, pp. 265-269.

The Workmen's Compensation Act and various Maternity Benefit Acts were still measures very remote from the principle of social insurance in India. They were simply attempts at social assistance, and their implementation was the sole responsibility of the employers. Excuses on the part of employers were not wanting, when the question of social insurance was being considered. It was alleged that it was difficult to collect contributions from workers, due to their shifting and migratory habits. Even sympathy with the workers was not slow in coming to the help of their masters who expressed concern about the ability of the workers to contribute out of their low wages to such a scheme. The awakening consciousness of labour during the war period brought about a rapid change in the climate of opinion, and Prof. B. P. Adarkar was appointed to prepare a scheme of health insurance for industrial workers. He recommended a compulsory sickness insurance scheme on a contribution basis, affecting only about 1,200,000 workers employed in the three major groups of industries—textiles, engineering, minerals and metals. But in these industries also the factories with less than 500 workers were excluded on the ground of difficulties in administration.

This scheme was scrutinised by two experts of the I. L. O. in 1945. They recommended its extension to all non-seasonal factories covered by the Factories Act and to child birth and employment injury risks also. On this basis the Employees' State Insurance Act, 1948, was passed. It may also be noted that the labour welfare schemes that are being proposed today are only in connection with the industrial proletariat who form a very minor section of all the working classes. The mass of the rural population is absolutely unprotected, and no steps have yet been taken to ameliorate their condition in any way, except the recent Minimum Wage Act.

We have no statistics to show the extent of unemployment in India. Moreover, in a country where there is chronic under-employment of millions, who are dependent for seasonal employment on land, figures of unemployment would be misleading. The war pushed this problem temporarily into the background, but it has raised its ugly head once again. The steep rise in unemployment in recent months, as revealed by the statistics of Employment Exchanges in part, has aroused concern. Mr. C. D. Deshmukh blamed unemployment as a great obstacle in the smooth functioning of the Five Year Plan. The Planning Commission published an eleven point programme, and Congress leaders have emphasised

the need to halt programmes of rationalisation and large-scale enterprises and concentrate on cottage industries. A scheme of village schools to relieve unemployment among the educated has been formulated and drastic changes in education are proposed, as if education was responsible for unemployment.

The problem of unemployment in India is fundamentally different from that of Western countries. In our country, the seasonal unemployment in agriculture and "disguised" unemployment are manifestations of a much more deeply rooted malady than the mere lack of adjustment between the supply of and demand for labour. It is doubtful, if under these circumstances, any measure short of a radical change in our economic organisation can help in the solution of this problem. It is desirable not to lose sight of the wood for the trees, and to remember that short term palliatives, such as the schemes we have considered are, can never bring us the fulfilment of our objective.

It may be added here that adequate social insurance has been regarded as the key stone of labour policy in advanced industrial countries of the West. Such insurance is defended, firstly, on the ground that an individual cannot be allowed to suffer for mishaps which may befall him for no fault of his own, but just because of the socio-economic environment in which he happens to work. Secondly, there is also the fact that labour in the West is much better organised, and social insurance schemes are a concession by employers and the State to the workers in the interest of industrial peace. In this country, the first argument cannot work, for we have not yet developed a high degree of civic consciousness. The second contingency does not arise, as labour is weak and unorganised. But, at a time when schemes for universal social insurance covering all conceivable risks are being worked in England, can we not put in a plea for the consideration of a similar scheme for our country in the interests of labour, when economic reconstruction for India is so much talked about?[1] There are, undoubtedly, difficulties in the way. A poorly paid Indian worker can hardly be expected to contribute to these insurance schemes, when his wage does not suffice even for a decent living. Perhaps these difficulties may even necessitate planning on a more radical scale for our country. They can never justify an attitude of inaction or apathy.

Workmen's Compensation

The question of workmen's compensation was raised as early

1 The Constitution recognises as a directive principle the desirability of unemployment insurance and old age pensions.

as 1884, but it was only after forty years that, due to the increasing rate of accidents and the pressure put upon Government, the Workmen's Compensation Act was passed in 1923. It was amended several times in later years. Under the Act the workman is entitled to compensation for any injury arising out of or in the course of his employment and for certain industrial diseases. The Act is administered on State basis by the Commissioners who are responsible also for the settlement of claims and for the disposal of compensation in case of fatal injury. The scale of payment is determined by the rates of wages ranging from Rs. 10 per month or less to a maximum of Rs. 200 or more. In case of temporary disablement, compensation is paid at one half of the monthly wages to a maximum of Rs. 30 p.m. The maximum period for compensation for temporary disablement is five years. In case of permanent disablement, compensation is payable in a lump sum varying from Rs. 700 to Rs. 6,300 according to wage rates. In case of death, compensation is payable in a lump sum upto a maximum of Rs. 4,500 according to the variation of the wage rates.

In spite of improvements in the Act, it is ineffective so far as industrial diseases are concerned. It is in practice only applied to accidents. But there has been a lack of adequate knowledge on the part of workmen regarding their legal rights in claiming compensation. On this question, the Labour Commission observed: "There are still cases where compensation for fatal accident should be and is not claimed; and it is our opinion that, unless steps are taken to give some assistance to dependants in the matter, it will be long before they are able to take full advantage of the Act. In many cases they live hundreds of miles from the industrial areas, and they communicate only at long intervals with the workmen whose dependants they are. On occasions they must be ignorant of his whereabouts and they may not hear of his death until some time has elapsed."[1]

The above act will be gradually replaced by the Employees State Insurance Act, 1948, which provides disablement and dependants' benefit at weekly rates varying with wages, instead of a lump sum payment under the Compensation Act. The full rate is half the average daily wage. A proportionate benefit is payable for permanent partial incapacity. The Act covers about 2,500,000 factory workers, earning less than Rs. 400 per month. Apart from employment injury benefits, this Act provides for medical care, sickness and maternity benefits. It applies to work-

1 Report, p. 311.

ers in perennial factories. The funds are made up by contributions from workers, employers and the State respectively. The Act is administered by the Employees State Insurance Corporation. Sickness benefit is at a rate equal to about half the average daily wages for the maximum period of 56 days during a continuous period of 365 days after a waiting period of 172 days. Maternity benefit is paid to insured women at the rate of 12 annas a day for a total of 12 weeks, the maximum number of weeks preceding confinement being 6.

Provident Funds

Provident funds exist in India but they are found operating only in undertakings directly or indirectly managed by Governments or municipalities, the railways and some large-scale private undertakings like banks, insurance companies and others. The Tata Iron and Steel Company extended the benefits of the scheme to all employees drawing a monthly salary of Rs. 15 or more. Every member pays 1/12th or 1/24th of his annual earnings and the company contributes an equal amount.

Recently, however, the Central Government has taken a commendable step of enacting the Employees Provident Funds Act, 1952, which replaced an earlier ordinance on the subject, and which applies to employees in six large industries, viz., cement, cigarettes, electrical, mechanical and general engineering products, iron and steel, paper and textile factories. The scheme covers about 1,500 factories and the benefits extend to about 1,200,000 workers. Employees and employers both contribute an equal amount—6¼ per cent of the wages plus dearness allowance payable to the employees. The cost of administration of the fund has, however, to be borne by the employers. The scheme was applied to Delhi and Kanpur from 24th February, 1952.

Maternity Benefits

The importance of maternity benefit legislation was first recognised in India after the adoption of a draft convention by the International Labour Conference in 1919. A private bill was rejected in 1924 by Government. The Labour Commission recommended that legislation should be undertaken throughout India, that it should apply to women in non-seasonal factories, that the entire cost of benefit should be borne by the employers, that maximum benefit period should be four weeks before and four weeks after child-birth, and that the administration should be entrusted as far as possible to women factory inspectors. The first Act in this behalf was passed in 1929 known as the Bombay Maternity

Benefit Fund. A similar Act was subsequently passed by the C.P. and Berar in 1931, by Madras in 1935, by U.P. in 1938, by the Punjab in 1943, and by Assam in February, 1944. The Central Legislative Assembly passed the Mines Maternity Benefit Act in 1941, which was amended in 1943.

The scope, qualifying conditions, and the period and rate of maternity benefits vary in different States. The amount of benefit in the Madras State and in the cities of Bombay and Ahmedabad is 8 annas per day, while in the rest of the Bombay State and in Madhya Pradesh the benefit is at the average rate of the woman's daily earnings, calculated on the wages of three months preceding the day on which she is entitled to receive the benefit, or at the rate of 8 annas a day whichever is less. In U.P. and Bengal the benefit is the same, but whichever is the greater amount is to be paid. In the Punjab the benefit is at the rate of 12as. a day, or at the rate of the women's average daily earnings, whichever is greater. The benefit in Assam plantations is at the rate of Re. 1 per week, with a maximum payment of Rs. 14. In other employments in Assam it is at Rs. 2 per week, or average weekly wage, which is greater. The qualifying period of employment entitling a woman to maternity benefit varies from 6 to 9 months in different States, except in Assam and for plantation workers in West Bengal where it is the lowest—150 days. The maximum period of benefit is 8 weeks in all the States, except in Madras and the Punjab, where it is 7 weeks and 60 days respectively. The Act applies to women employed in all regulated factories in Bombay, Madhya Pradesh, Assam, Mysore and Hyderbad, but in other States it applies to women in non-seasonal factories only.

Housing Conditions

The housing conditions of the majority of factory workers have been rightly characterised as deplorable. The Census Report of 1931 stated that the housing conditions in the city of Bombay, the most industrialised centre in India, were a disgrace to any civilised community. Most of the organised industries have grown up in or near large towns. "Limitations of space and high land values are responsible for much of the congestion in the large cities. Probably the most important has been the lack of control over the selection of sites intended for industrial development and the consequent additional overcrowding, caused by the presence of large numbers of immigrant workers seeking accommodation

in the heart of towns already suffering from a shortage of houses."[1]

The housing accommodation in organised industries may be supplied by employers or by public bodies, by trade unions or what is the most common practice, by private landlords. Plantation workers and factory workers to a limited extent are housed by employers. A number of cotton mills in Bombay and Ahmedabad supply housing to their workers. So also do the jute mills in Calcutta. The Tata Iron and Steel Company have built over 8,000 houses for their employees.[2] In Madras, 226 factories had provided housing accommodation for their workers by 1936. The railways provide quarters for a larger number of railway servants. The provision of accommodation by public and semi-public bodies has been carried out on a large scale in Bombay city.

The quarters provided by railways have adequate sanitary arrangements. But the houses in which workers dwell in industrial towns are built without plan, close to one another, with no provision for light and air. The report of the Rege Committee observes: "Very little by way of providing more and better houses for industrial labour has been done either by Government or Municipalities. . . . The houses erected by employers differ greatly from one another, and only a small percentage of workers are, on the whole, accommodated in them." "If the present day industrial worker in India is physically inefficient and unhealthy, the intolerable housing conditions are in no mean degree responsible for it."[3]

The following table shows the density of occupation in dwellings of different sizes in a few towns. It will be noticed that the average number of occupants per room is the highest in one room tenements:

1 Report of the Royal Commission on Labour in India, p. 170.

2 Housing at Tatanagar (Rege Report, p. 310)

Total No. of Quarters	Accommodation	Rent
88	1 living room	Rs. 1-8 to 5-0
3383	1 living room, kitchen and bathing platform	Rs. 2-4 to 11-0.
4217	2 living rooms, kitchen, latrine, bathing platform, front garden	Rs. 6-0 to 21-0.
96	2 living rooms with verandah, kitchen, etc.	Rs. 4-0.
Chawls 351	3 to 5 living rooms with kitchen etc.	Rs. 12-6 to 40-0.
293	Bungalows for officers	

3 Report, p. 296.

Density of occupancy (number of persons per room) in dwellings of different sizes[1]

	1 Room	2 Rooms	3 Rooms	All dwellings
Madras				
Sugar Mills	4.9	3.2	2.7	4.2
Tramways	5.0	2.2	—	4.6
Tanneries	5.9	3.2	3.0	4.8
Bombay				
Employers' Houses	4.5	3.2	—	4.4
Private Houses	5.8	2.7	—	5.2
Printing Presses	4.8	4.3	—	4.7
Kanpur				
Employers' Houses	4.0	3.1	—	3.9
Private Houses	3.8	2.4	—	3.2

As for amenities like bath rooms, latrines, kitchens and water supply, the Rege Committee observed that dwellings in cities like Meerut, Darbhanga, Bombay and Kanpur lacked kitchen facilities. There was nothing to show that dwellings devoid of kitchen had any subsidiary rooms or verandahs. The universal scarcity of bath rooms is in striking contrast with the almost universal practice of the workers to have a daily bath. Such outdoor bathing may suit rural life, it is extremely unsuited to life in a crowded city. "Common latrines are plentiful relatively to independent latrines. In some centres the situation with regard to latrines is almost incredible. Complete absence of latrines implies the use of either public latrines or surrounding open space for the purpose."[2] As for electricity, water supply, satisfactory drainage and ventilation, which are taken for granted by middle class people, are as yet unknown to the majority of industrial workers.

Lack of sanitation is not the only hardship from which the labourers have to suffer in industrial centres. The effects on health arising from insanitary conditions are aggravated by overcrowding. "The overcrowding of people in dark, ill-ventilated quarters in industrialised cities is also an important contributory cause of infant mortality and tuberculosis."[3] In Bombay, the proportion of families living in single rooms was 97 per cent in 1921 and 89 per cent in 1930. According to the Rent Enquiry Committee, Bombay, the total number of persons living in rooms, each occupied by 6 to 9 is 256,379; each occupied by 10 to 19 persons is 80,113, and each occupied by 20 persons and over is 15,490. Every

1 Summarised from Rege Committee's Report, Table 137, p. 313.

2 Cf. "Neglect of sanitation is often evidenced by heaps of rotting garbage, and pools of sewage, whilst the absence of latrines enhances the general pollution of air and soil," *Ibid.*, p. 271.

3 *Ibid.*, p. 296.

third person in the city lives in such frightfully overcrowded conditions. It was 73 per cent in Ahmedabad in 1926 and 72 per cent in Kanpur, and 60 per cent in Nagpur and Jubbulpore in 1930. The average number of persons per tenement was 4.6 in Sholapur, 3.87 in Ahmedabad and 3.88 in Bombay.[1] The report on Industrial Labour pointed out that one of the causes of overcrowding was sub-letting. The workers resent paying rent in some cases as they have not been used to pay rent in their villages. They, therefore raise the amount by sub-letting. In other cases the workers are not in a position to pay rent without taking lodgers. We are told that in Bombay about 20 per cent rented space in their lodgings to other persons varying in number from 1 to 12.[2]

With regard to health conditions amongst industrial workers the Bhore Committee had pointed out that "the machinery for providing such information does not exist at present."[3] Prof. Adarkar collected data with regard to sickness and absenteeism from some firms. These show that about 6 to 14 per cent of the workers fell sick and each sickness resulted in 3 to 4 days of absence from work. Research work is being undertaken into the problems of industrial health by the Health Research unit of the Indian Council of Medical Research.

When we look to housing conditions for workers in big cities, we cannot help reflecting upon the slow rate of improvement in this connection. In Calcutta conditions are as bad as in Bombay. "Inside the area enclosed by Circular Road and the River Hooghly, Calcutta contains no less than 22 blocks of residential property without any street system, and served internally only by tortuous lanes, passages and fragmentary lengths of narrow streets." Describing the *Basti* or hut system in Machu Bazar and Bow Bazar, Dr. Mukerjee observes, "The typical unit of the quarter consists of a central courtyard, some 15 by 10 feet, surrounded on all sides by thatched huts made of mud. Each room gives shelter to some 4 or 5 people, men, women and children, there being one bed for the whole family, one tap and one closet for the whole colony." "The average size of these dens is 9 feet by 6 feet by 5 feet in each of which a family of 4 to 5 people live, store things and cook their food. The tragedy of life occurs when a woman is confined or a man falls sick in one of the veritable hells."[4] As Mr. S. R. Deshpande observes: "These huts have been built back to back, and

1 *Labour Gazette*, May 1931.
2 Geneva Report, p. 307.
3 Report, Vol. I pp. 73-4.
4 "Comparative Economics," Vol. II p 286.

can be reached only through narrow winding lanes. Generally speaking, these are made of mud plaster, with thatched or tiled roofs, and consist of a single room, without plinth or windows, ventilation and light being provided by means of a low door. Even this extremely inadequate ventilation is cut off by the workers themselves by means of old kerosine tins, gunny bags, etc., for securing privacy. There is no separate kitchen, and more often than not, a corner of the room is used for cooking purposes. The municipal taps on the road side are the main source of water supply. In order to reduce the burden of rent, the practice of subletting these huts is most common among the busti dwellers, and this makes the bustis extremely overcrowded."[1] No more telling testimony as to housing conditions in Calcutta can be offered than the admission of R. G. Casey, the Governor of Bengal, who on visiting the Basti area of Calcutta on the 1st December 1944 observed: "I have seen something of the way in which hundreds of thousands of the citizens of Calcutta are obliged to live. I have been horrified by what I have seen. Human beings cannot allow other human beings to continue to exist under these conditions."[2] And yet these conditions, were allowed to exist for a hundred years by a civilised Government that claimed to be the trustee of the welfare of the millions of India.

Conditions in jute mill towns and Bengal coal fields are not any better. Although there is no dearth of open space and land is cheap, the sudden growth of mill towns has led to serious overcrowding and insanitary conditions in places like Titaghur, Kharagpur, Naihati and Serampur. "In spite of the abundance of land in jute towns, single room houses meant for four adults are sometimes occupied by 11 to 16 adults."[3] The employers of the jute mills generally provide lines or blocks of back to back rooms, 8 feet by 8 feet for the residence of some of their workers. A small door and a small window opening on the verandah constitute the ventilation of the rooms. On account of the scarcity of even such rooms, 8 to 12 and sometimes even 15 souls live in a single room.

Thus the workers in India are "housed like animals, without light and air and water." As Dr. Kuczynski observes: "On the whole, the working conditions in Indian factories, mines, railways and plantations are just as barbarous as the living conditions. They are far worse than in any European country, far worse than

1 "Enquiry into Family Budgets of Industrial Workers in Howrah & Bombay," p. 21.

2 *"Bombay Chronicle,"* 2nd December 1944.

3 D. F. Curjel, "Women's Labour in Bengal Industries," quoted by Gupta in "Labour and Housing in India," p. 81.

in any Dominion, with the exception of conditions among natives in Souh Africa; they are worse probably than in any South and Central American State."[1]

Recent Housing Development

Industrial housing has now been receiving increasing attention from the Central and State Governments. In April, 1948, the Government of India announced, as a part of their industrial policy, a scheme for the construction of one million houses for workers to be completed within a period of ten years. In April, 1949, a fresh scheme for industrial housing was formulated, on the basis that the capital required should be provided as a loan to the extent of two-thirds by the Central Government and one-third by the State Government or an employer sponsored by the latter. The loan from the Central Government was to be free of interest and to be repaid by the State Governments within 25 years. The States were asked to notify their programmes of industrial housing. The scheme, however, could not be carried out in full, due to financial stringency, but a sum of one crore of rupees was advanced to the Governments of Bombay, Madhya Pradesh, Bihar, Orissa and Punjab. The Government of Bombay set up a Housing Board in 1949, under the Bombay Housing Board Act, 1948. During the year ending March 1950, 1186 tenements were constructed at Bombay, Ahmedabad and Sholapur for industrial workers. The following statement shows the number and types of tenements and the subsidised monthly rent:—

Location	No. of tenements	Type	Rent Rs.
Bombay:			
Worli Hill	192	Two rooms	37
Sewree	252	One room and kitchen	20
Wadala	54	One room ans kitchen	34
Ahmedabad	236	Two rooms	23
Sholapur	252	Two rooms	*
	72	Hostel	*
	27	Three rooms	*

* Rent not fixed.

Apart from these, the Bombay Housing Board is in charge of other housing programmes of Government. The total number of tenements so far constructed by Government is 5351.

Similar schemes, on a less ambitious scale, have been formulated by Madhya Pradesh, Punjab, Uttar Pradesh, Hyderabad and Pepsu. Some of the textile mills in Bombay and elsewhere have provided tenements for their employees. So also have the sugar, cement and engineering industries.

1 Op. cit., p. 141.

The Planning Commission recognising the gravity of the problem in urban areas, due to the increasing influx of population from the villages and aggravated by the influx of refugees, recommended the payment of subsidies to the State Governments to the extent of 50 per cent of the total cost of production, and of 25 per cent to private employers of labour and co-operative societies. Loans in addition to subsidies were to be advanced to State Governments, repayable in 25 years. The taxation on vacant lands in urban areas should be so designed as to make all land hoarding unprofitable. Temporary structures are to be discouraged; and the cost of a tenement in a multi-storeyed building in large towns is estimated at Rs 4500, each tenement to have a carpet area of 240 square feet, comprising a living room and a kitchen.

The Commission consider the clearance of slums by State Governments an essential part of housing policy. Owners of slum areas perform no service and should not have compensation over and above the actual value.

Housing Boards are to be set up in every State statutorily appointed by Government for implementing the housing scheme. They should have associated with them advisory bodies consisting of representatives of employers, tenants, the building trade and the general public.

Conclusion

Industrialism is advancing rapidly in the country. Its progress is apt to be measured in terms of wages and profits, but the vast human material which it so ruthlessly affects scarcely commands attention. Deep in the background of these slums, the flames are spreading. We need no labour leaders or Bolshevik teaching from outside to fan these flames into a rebellious conflagration. Our interested capitalists eager for dividends have failed to observe the need for action. The need for providing decent homes to the workers and their families must be regarded as a first charge on the industry, which it has to bear even as a part of its costs. Otherwise, the conflagration may spread and where there are slowly rumbling forces underground there may be violent upheavals involving needless destruction.

If we probe deep into the social unrest and economic ailments of our industrial civilisation, which rests on a basis of capitalism, we shall find at the root of the malady the sense of insecurity, the uncertainty of finding employment from day to day which is the inevitable accompaniment of production for profit. The social insurance schemes of our times can be called the antitoxins which

the body corporate produces to fight against a disease which its own economic organisation involves. Such schemes may be regarded as the methods by which a capitalist society tries to ensure its continuance, and finds renewed strength against the growing menace of a socialist or communist order. As for India with its millions of labourers on land, its artisans and hand-workers and its two and a half million of factory workers, any comprehensive scheme of social insurance based on conventional Western lines would be beyond the dreams of the wildest imagination. But even assuming that such schemes were financially practicable, we have to keep in mind the obstacles that have to be overcome including the immensity of the population, its phenomenal poverty, the lack of reliable data, the primitive character of sanitary measures, and the absence of an effective public opinion, conscious of the claims to a full human life. Do not all these considerations inevitably suggest the need for a radical transformation of the economic order?

CHAPTER XXI

INDUSTRIAL WAGES AND STANDARD OF LIVING

The problem of wages in organised industries in India needs to be studied in view of the conditions in the villages from which the labour is drawn. Industrial wages and agricultural wages in India are closely related. More so, when we remember that even to-day there is a constant movement back and forth between farm and factory. Incomes in the villages are proverbially low. Although, therefore, industrial wages have been generally higher than earnings in agriculture or of labour on farms, the level of such wages is largely influenced by the poverty of the villages.

It was not till 1875 that the first attempt at collecting wage statistics was made by Government. It would appear that both agricultural and industrial wages remained fairly steady between 1873 and 1891. Information collected by the Bombay Government in 1892 showed that mill wages had remained at about the same level since 1860.

The Labour Commission of 1908 observed that the wages of textile factory operatives were considerably higher than those earned by the same class of men in other employments. At the time of their enquiry, monthly wages in the cotton textile mills varied within the following limits:—[1]

1 Pillai. op. cit. p. 242.

Half timers	Rs. 2½ to Rs. 4½	Boys between 14 and 17	Rs. 5 to Rs. 13
Hands in the card frame depts.	Rs. 7 to Rs. 18	Head spinners (male)	Rs. 25 to Rs. 35
Male piecers	Rs. 10 to Rs. 16	One loom weavers	Rs. 10 to Rs. 15
Women (reeling and winding)	Rs. 5 to Rs. 12	Two loom weavers	Rs. 18 to Rs. 35

The following table shows weekly wages in a Calcutta jute mill between 1896 and 1927:—[1]

Average Wages (in rupees) in a Jute Mill in Bengal

In January	Carding	Rovers	Spinner	Shifters	Winders	Weavers
1896 ..	1.37	2.19	2.50	0.87	2.50	4.75
1900 ..	1.44	2.25	3.00	1.00	3.00	5.25
1904 ..	1.47	2.37	3.25	1.12	3.25	5.37
1908 ..	1.50	2.75	3.50	1.25	3.50	5.50
1912 ..	1.50	2.75	3.20	1.23	3.20	5.65
1916 ..	2.00	3.3	3.50	1.75	3.60	5.65
1920 ..	2.75	5.4	4.33	2.00	5.88	8.75
1927 ..	2.87	4.37	4.50	2.19	5.10	7.50

Datta's enquiry into the Rise of Prices in India, using the average of the years 1890-94 as 100, shows the following advance in the wages of cotton industry:—

1890-1894	1895	1900	1905	1910	1912
100	102	112	121	134	141

Though cotton mill wages advanced less rapidly than other wages and prices before 1914, they more than made up the difference during the war and the post-war periods. The wages in Bombay did not differ much from those in Ahmedabad, but they were higher than those in Sholapur, Baroda State and other centres. The attempt of Bombay employers to reduce wages by 11 per cent led to a disastrous strike in 1925. The following table shows the wage rate in different centres in the Bombay Presidency:—[2]

Average monthly earnings per head in cotton mills

Place	Class of Labour	May 1914 Rs. as. ps.	May 1921 Rs. as. ps.	August 1923 Rs. as. ps.
Bombay City	Men	18 6 8	34 15 2	35 10 7
	Women	10 0 10	17 6 6	17 5 6
Ahmedabad	Men	15 7 1	34 2 11	33 0 9
	Women	9 15 11	19 9 4	18 2 7
Sholapur	Men	14 3 11	25 13 0	22 3 10
	Women	5 13 11	10 15 9	8 9 7
Bombay Presidency	Men	17 0 8	33 6 10	33 1 10
	Women	9 0 1	16 9 1	16 3 10

The following table of index numbers of wages in Bombay cotton mills shows the movements of wages with 1914 as the base year:—[3]

1 Buchanan, op. cit. p. 326.
2 *Ibid.*, p. 331.
3 *Ibid.*, p. 332.

Index number of wages in Cotton Mills

Year	Inlex number	Year	Index number	Year	Index number
1870	76	1890-94 (Average)	80	1895	82.4
1900	85.6	1905	86.4	1910	102
1912	99	1914	100	1917	110
1918	125	1919	146	1920	190
1922	190	1924	175	1930	175

It will thus appear that between 1870 and 1895 there was very little advance in the rate of wages. Between 1895 and 1914 wages rose with the rise in prices. From 1914 to 1930, there has been a rapid advance, the peak having been reached in 1920.

At the beginning of the year 1933, the wage position in Bombay was more or less the same as in the year 1926, when the workers were in receipt of wages which were made up of basic rates of pay, plus a dearness food allowance. If the average daily earnings of all adult workers in all cotton mills in Bombay City in October, 1934, are compared with those in the 19 mills selected for the 1926 enquiry, it is found that the general reduction in wages as between July, 1926 and October, 1934 was one of 16 per cent. In Ahmedabad mill wages were 5 and 6 per cent higher than in 1926, because of the increase granted in 1930. In Sholapur, according to the General Wage Census of 1934, the earnings of cotton mill workers in all occupations were less by 20.5 per cent as compared to July, 1926.

It may be noted that the average index number of wholesale prices of all commodities in Bombay and Calcutta were 98 and 87 in 1933, and 95 and 89 in 1934 respectively.

The following tables are of some interest in this connection:—[1]

Monthly Earning—All Occupations, July 1937

	Rs. as. ps.
Bombay	28 4 10
Ahmedabad .. .	30 11 10
Sholapur	18 6 8
Poona	20 11 6
Whole Province	27 5 8

Comparative Monthly Average Earnings—All Occupations

	1934	1937
	Rs. as. ps.	Rs. as. ps.
Bombay ..	28 15 8	28 4 10
Ahmedabad ..	35 1 2	30 11 10
Sholapur ..	18 15 4	18 6 8
Whole Province ..	28 11 4	27 5 8

1 Calculated on the basis of 26 days per month from figures given in the Bombay Textile Labour Enquiry Committee Report, 1940, pp. 55-57.

Wages in Mines and Plantations

Mining wages like wages on tea estates have been low, differing slightly from the wages of unskilled workers. Daily wages in two mica mines in 1891 were reported as follows:—[1]

	The Sapohi Mine	The Singar Mine
Blasters (male)	3 to 5 annas	11 to 13 pice
Ordinary (male)	2 annas	8 pice
Women	6 pice	6 pice
Children	3 to 5 pice	4 to 5 pice

Similarly in a colliery the average wage per week for underground workers was Re. 1-1-0 and for surface workers 14 annas 6 pies. Mining wages, however, improved between 1890 and 1912. The following table from Datta bears out the rise:—

Increase in Mining Wages in Index Numbers

1890-1894	1895	1900	1905	1910	1912
100	106	133	158	186	189

After 1916 there was a rise, the average wage being 12 annas per day in 1921. Miners' wages, however, are low compared to those of mill workers. In the Raniganj field in 1930, men's wages per month varied between Rs. 12 and Rs. 16 and women's between Rs. 8 and Rs. 12 The President of the National Association of Colliery Managers in a speech in February, 1937, referred to the "ridiculously low wages of the workers."

The wage level in the mica industry is probably the lowest in India with the exception perhaps of certain unregulated industries like shellac and bidi making. The wages in the factory section of the industry are lower than those in the mining section.[2] The reason why in spite of the low wage level the workers are not seeking alternative sources of employment are that the work is not strenuous, and whole families work in factories or in their own homes.

The position at present may be briefly stated. The basic rates fixed by the Conciliation Board and the Fact Finding Committee during 1947-49 range from 3 annas per day for loaders to Re. 1/- for miners and others, plus dearness allowance varying from 30 to 150 per cent of basic wage. All underground workers are entitled to dearness allowance at the rate of 112½ per cent of basic wages.

The wages of the plantation workers in India are the lowest. In the Assam Valley Tea Gardens, the average monthly earnings of the settled men workers were Rs. 7-13, of women Rs. 5-14 and of children Rs. 4-4.[3] These workers were given some concession re-

1 Buchanan, op. cit. p. 321.
2 Rege Committee Report, p. 266.
3 Shiva Rao, op. cit., p. 127.

garding free housing, medical treatment, etc. But on the whole their conditions are very bad. According to the Rege Committee the average monthly cash earnings of settled labourers on the books in 1944 were Rs. 9-10-3, Rs. 7-13-1, and Rs. 5-14-10 per man, woman and child respectively in the Assam Valley. The average daily cash earnings were Re. 0-8-2, Re. 0-6-10 and Re. 0-4-8 per man, woman and child, in the Assam Valley, and Re. 0-6-7, Re. 0-6-2 and Re. 0-3-2 in the Surma Valley. These wages are supplemented by concessions in the shape of land for cultivation, free housing, medical attendance, fuel and grazing facilities, and cheap food stuffs and clothing. In South Indian plantations benefits, if any, are very meagre. The food concessions played a significant role during the war, because of a great rise in their prices and short supply.[1] The various State Governments have now fixed minimum wages under the Minimum Wages Act for the plantation workers. These rates range from 14 As. to Re. 1-5-0 per day inclusive of dearness allowances.

Wage Movements before 1939

Dr. Kuczynski gives us a consolidated table of the movement of wages by index numbers during 58 years, 1880-1938, in different industries as below:—

	Wages in Individual Industries (1900=100)						
Years	Cotton	Jute	Railways	Mining	Metal Workers	Building Workers	Plantations
1880-89 ..	80	84	87	71	75	90	—
1890-99 ..	90	87	95	81	89	89	100
1900-09 ..	106	106	109	119	112	109	104
1910-19 ..	142	128	139	176	138	133	122
1920-29 ..	273	194	245	255	190	195	170
1930-38 ..	242	148	286	191	171	168	121

In all industries wages had a tendency to rise up to the end of the first world war. The rate of increase was more or less similar in different industries, except in the mining industry where there was a rise above the average, and in the plantations where there was a lag. But though money wages showed a fairly uniform trend in the upward direction, this cannot be taken as a fair indication of an upward tendency in real wages.[2]

Wages During Second World War and After

The Rege Committee observe that as a result of recommendations made by the Bombay Textile Labour Enquiry Committee monthly wages were increased in 1938 in cities like Bombay, Ah-

1 Rege Committee Report, pp. 259-61
2 Op. cit., 131.

medabad and Sholapur by 9 to 14 per cent. As a result of rise in cost of living during the war, dearness allowance was also introduced at varying rates in different industrial centres and relief was given by supply of consumption commodities at pre-war rates. In 1944, in Bombay City the wages including allowances varied between 50 and 75 rupees per month, amongst different classes of mill workers.

Referring to wages in textile and other industries in the period between 1939 and 1944 Mr. P. P. Pillai observes: "Even these spectacular increases in the earnings of factory workers have not compensated them adequately for the steady increase in the cost of living. As against an increase of about 104 per cent in the earnings of factory workers between 1939 and 1944, the working class cost of living index in December 1944 (base August 1939=100) was as high as 225 in Bombay, 289 in Ahmedabad, 297 in Kanpur, 254 in Nagpur, 271 in Lahore and 213 in Madras."[1]

We reproduce below the following table showing the average earnings of factory workers in different industry groups in recent years:—[2]

Average Annual Earnings of Factory Workers in 1939-49

(In rupees)

Industry	1939	1945	1946	1947	1948	1949	Increase in 1949 over 1939 %
Textiles	293.5	613.5	624.5	771.7	931.9	1,055.8	259.7
Cotton	320.2	723.4	721.8	909.3	1,094.6	1,193.0	272.6
Jute	230.8	390.5	425.0	497.6	637.7	795.0	244.5
Engineering	263.5	653.1	696.1	698.7	879.4	938.1	256.0
Minerals and Metals	457.2	601.9	599.8	886.2	1,065.1	1,036.5	148.6
Chemicals and Dyes	244.8	445.2	492.4	592.6	663.8	721.7	194.8
Paper and Printing	332.7	568.8	638.4	728.5	835.3	911.5	174.0
Wood, Stone and Glass	194.2	413.6	434.3	495.4	567.6	615.6	217.0
Skins and Hides	285.8	536.7	558.2	603.9	826.3	889.1	211.1
Ordnance Factories	361.9	642.8	721.2	755.2	918.0	1,129.4	212.1
Mints	367.4	667.0	858.7	1,071.2	1,378.2	1,437.2	291.2
Miscellaneous	281.2	503.2	611.8	663.1	796.9	876.8	211.8
All Industries	287.5	595.8	619.4	737.0	889.7	998.4	245.5

The working class cost of living index numbers in 1949, with 1939 as base, were 292 (Bombay), 339 (Ahmedabad), 410 (Shola-

1 "Labour in South East Asia," 1947, p. 18.

2 "Indian Labour Year Book," 1949-50, p. 212. We have corrected the last column figures.

pur, 425 (Jalgaon), 478 (Kanpur), 377 (Nagpur), 330 (Madras), as against the average increase in wages of 245.5. The increase in wages, therefore, cannot be said to have made up for the rise in the cost of living of workers.

During the last war and the post-war period there was a rapid rise in prices—and labour, in the organised sector, had substantial increases in wages. The inflationary pressure thus created could only have been checked if means were found to divert the expenditure on consumption into channels of saving. The Planning Commission find it necessary to resort to Governmental control both of prices and wages. They recommend in a somewhat halting and hesitating manner the imposition of restrictions on profits, with a view to restricting wages. The pre-war real wages have to be restored by increased productivity through rationalisation. A tripartite machinery is to evolve the standards which should guide wage boards or the tribunals on questions of wages, in conformity with the principle that disparities of income have to be reduced to the utmost extent. With regard to dearness allowance a committee recently appointed by the Government of India stated in its report that, as in the foreseeable future the cost of living index is not likely to fall below the range of 265-284, taking the pre-war index to be 100, it was desirable that 50 per cent of the dearness allowance admissible to Central Government servants drawing a basic pay upto Rs. 750 per month should be amalgamated with pay. The Planning Commission have accepted this recommendation and further recommended that the principle should be extended to workers in the private sector also.

System of Wage Payment and Wage Fixing

Payment by piecework is found in a large number of factories. In 1926, for instance, the number of workers incuding men, women and children paid by the piece amounted to about 48 per cent in Bombay and about 45 per cent in Ahmedabad. In coal mines all work underground is paid by the piece. In the railways the workers are daily rated or monthly rated. In most other industries wages are paid by the time rate.

In almost all industries wages are paid in cash and indirect payment is not common. The most important forms of indirect payment were practices connected with the truck system. Some mineowners in Madras were reported to be issuing orders on shopkeepers to supply provisions to the labourers. In some factories, grain departments were established where grain could be bought 10 per cent below the market price. In these factories, wages

were paid partly in cash and partly by ticket. The Buckingham and Carnatic Mills in Madras maintain stores for the supply of provisions, and in Bombay 40 per cent of the mills under the control of the Millowners' Association conduct cheap grain stores, where grain is sold at wholesale prices for cash as well as on credit.

Under the Payment of Wages Act, 1936, no payment of wages can be delayed beyond one month and the common practice is to pay by the month. Unskilled and casual workers are usually paid by the day. In the jute mills in Bengal all textile workers are paid by the month. The same principle was extended in January 1948 to persons employed in coal mines.

Before the coming into force of the Payment of Wages Act, delay in the payment of wages was common, and was a factor in increasing the indebtedness of the workers. The length of time which elapses between the end of the period during which wages are earned and the day of payment varies in different States and industries. While daily wages are paid on the day on which they have been earned, weekly wages are paid 2 to 5 days later, and before the 1936 Act, monthly wages were paid from 10 to 15 days after the end of the month. There are instances where the waiting period for monthly wages was extended to a month. The main purpose of postponement is to keep a hold upon the worker. Long periods of waiting involve hardship for the workers; relief is sometimes given in the form of a wage advance. Under the new Act, wages must be paid before the expiry of the 7th day in undertakings employing less than 1,000 workers and before the expiry of the 10th day in other cases. One wonders as to why the employers should be given such latitude of 7 to 10 days.

However convenient it may be for factory owners to continue the practice of delaying payment, it is undoubtedly a great hardship on workers. The long period before the first pay day usually about 6 weeks and the long subsequent periods, are responsible for the growing indebtedness of the workers, who are compelled to borrow money at ruinous rates of interest. An attitude of indifference on the part of Government—even the Popular Governments when they were in office—was only possible in a country where labour organisation was yet in its infancy. It may be noted, however, that "the Payment of Wages Act seeks only to ensure the regular payment of wages, and to prevent the exploitation of wage-earners by arbitrary deductions and fines; it does little to

help the worker with no bargaining power to secure a living wage."[1]

Fines and Deductions

Certain deductions from wages of workers are common in the textile mills. The Indian worker is said to be irregular in attendance, and careless of the employer's machinery, raw materials and finished products. The practice of fines was found to be general in all parts of Bombay Province in an official enquiry in 1928. The three chief offences against factory discipline punishable by fines have been (a) improper observance of time, (b) damage to machinery, materials or goods, and (c) certain improper behaviour.

To people accustomed to village life, one of the most irksome features of the factory system is the necessity of observing time schedule. If the Indian worker lives far away from the place of work, he cannot hear the whistle; he often arrives after the work has started. The fine is either fixed in amount or graded according to the degree of lateness. In many cases, the late comer is not admitted, particularly where labour is plentiful. Workers often absent themselves without notice. A fine equal to two days wages for every day of absence is applied. Continued absence is followed by dismissal.

Fining for bad work is frequently resorted to in the case of weavers who are required to purchase the cloth they have spoilt. The Bombay Fine Enquiry Committee found that this custom was followed in 58.3 per cent of the textile mills in the province. The Indian Tariff Board condemned this practice on the ground that it caused irritation far beyond the good it was intended to produce. In 46 of Bombay Presidency's 206 textile mills, there were 50,981 cases of fining, averaging Rs. 3-4-7 each. The amounts collected by fines were credited to revenue; they were large enough to be considered worthwhile by millowners.

Another deduction from wages which causes irritation arises from the refusal of mills to pay wages more than three months overdue. Another practice is the confiscation of wage due in addition to summary dismissal for forbidden conduct such as smoking in specified places.

The payment of Wages Act, 1936, laid down that fines can only be imposed for acts and omissions specified in notices. They cannot be imposed on children under 15 and the maximum

1 "Labour Legislation in India. 1937-52." I.L.O. Indian Branch, New Delhi, 1952.

amount may not exceed an amount equal to half-an-anna in the rupee of the worker's earnings in any month. Fines must be recorded in a register, and the proceeds applied to purposes beneficial to the persons employed in the undertaking. According to the Factory Department's statistics, fines realised from workmen in the cotton textile mills in the Bombay Province amounted to Rs. 1½ lakh in 1937. Fining as a means of enforcing discipline is practically abolished in British industry. There is no reason why this discredited practice should be continued in India.[1]

Commission (Dasturi)

There is another kind of deduction from wages which sometime rises to a considerable percentage of the wage. This is known as dasturi. The jobber or foreman by whom the worker is employed charges for the original appointment and collects something from the periodic wages. A Labour Intelligence Officer from Bengal says in regard to it, "Dasturi exists but cannot be proved. . . . The lack of proof is not due to its non-existence but to the unwillingness of individuals to disclose details."[2] He points out that where penalties have been laid down for receiving dasturi the result has been to drive the practice underground. There was clear evidence according to him that the practice prevailed from one end of the recruitment system to the other. The coal mines have a particularly bad reputation with regard to this practice. It has been stated by persons acquainted with mining conditions that the practice extends even to the managing agency firms.

It is difficult to determine the proportion of the workers' wages which goes in these commissions. It may vary from 1 to 10 per cent of the wages. A woman worker earning Rs. 3 per week in a jute mill told the Royal Commission on Labour that on her first employment she paid Rs. 4 as a bribe to the jobber and 2 annas per week out of her wage and that whenever she returned to work after a few weeks' absence she had to pay a similar sum, namely, Rs. 4. The Labour Commission observed: "We were satisfied that it is a fairly general practice for the jobber to profit financially by the exercise of this power" (of appointment and dismissal). "The jobber himself has at times to sub-

1 Employers are now abandoning the fine system in favour of locking out individual workers for periods up to three weeks, an improvement upon the fine system. (Kuczynski, op. cit. p. 133). Cf. "As the amount of fine permissible under the Act is trifling, several employers resort to suspension of workers for a day or half a day even for slight negligence on their part and to reduction in their pay." (Rege Committee Report, p. 49.).

2 Quoted by Buchanan, op. cit. p. 337.

sidise the head jobber; and it is said that even members of the supervising staff sometimes receive a share of the bribe."[1] The Commission recommended that all power of engagement and dismissal of labour should be taken away from the jobber and entrusted to a labour officer, subject to the sanction of the general manager of the factory. Though labour officers are appointed in many industries , the jobber continues to be the chief recruiter of labour. Even where the *badli* control system is introduced, e.g. in Bombay and Sholapur, the jobber has not lost his influence over recruitment. According to the Government Labour Officer of Bombay, Mr. Pryde, the jobber had not been eliminated in practice for purposes of recruitment.[2]

In this connection, the Rege Committee's Report has interesting observations to offer: "In spite of the undoubted abuses of the system, it is not certain that Indian labour has reached that stage of development and mobility, where the intermediary for recruitment can be easily dispensed with; and under existing circumstances, in the absence of alternative agencies, the jobber or his various namesakes have to be accepted as an inevitable factor. The jobber's close touch with the recruiting districts and villages, and his understanding and appreciation of the habits, hopes and fears of the workers, render his position more advantageous as compared to direct agencies of recruitment, in view of the latter's comparative aloofness. It must be remembered that even Government had to seek the help of such intermediaries and pay them a commission in order to obtain recruits for military service or other employment projects."[3] But. so long as jobber and other intermediaries are employed to recruit labour, payment of commission and the resulting reduction in wages will continue. It is a truism that legislation, however drastic to curb illicit gratification, will never be effective.

Standard of Living

It has been pointed out that the earnings of workers are not a reliable guide to their real wages, owing to the absence of accurate wage statistics and cost of living index numbers. The Bombay Labour Office undertook enquiries into workers' budgets during 1921-22, a further enquiry into the budgets of cotton mill workers of Sholapur in 1925 and in Ahmedabad in 1926. A General Wage Census was started in

1 Report, p. 24.
2 Report of the Textile Labour Enquiry Committee, Vol. II (1940), p. 338.
3 Report, p. 80.

1934 by the Gvernment of Bombay to collect all possible information regarding wages in all the perennial and seasonal factories in the province of Bombay. The results of an enquiry in Madras were published in 1938. The Labour Commission had also gathered some data in 1930. The results of these enquires are not strictly comparable as they refer to different years. The following table shows the average size of working class families in different industrial centres :—[1]

Locality	Number of families	Number of Dependants: Living in the family	Living away from the family	Total
Ahmedabad	1 820	4.33	0.48	4.81
Bombay	2,030	3.96	0.69	4.65
Calcutta	2,707	4.09	0.87	4.96
Cuttack	168	5.54	nil	5.54 (entirely local labour force)
Delhi City	581	3.80	0.68	4.48
Jalgaon	338	5.58	0.07	5.65
Jamshedpur	691	4.42	2,94	7.36
Jharia	999	3.62	1.75	5.37
Jubbulpore	482	4.06	0.73	4.79
Sholapur	778	5.39	0.14	5.53

The size of the working class family varies in different centres. The small number of absentee dependants in cities like Jalgaon and Sholapur is probably due to the fact that most of the workers have settled down in the city and constitute a working class completely detached from the land. In all other cases, the workers have family relations in the village. The table given below shows the number of wage earners in the family:—[2]

Centre	Number of families	Percentage of families having: One earner	Two earners	Three earners	Four or more earners	Total
Ahmedabad	1,820	58.69	32.64	6.70	1.97	100
Bombay	2,030	59.11	31.58	7.29	2.02	100
Calcutta	2.707	66.24	25.76	6.61	1.36	100
Cuttack	168	66.67	22.62	10.12	0.59	100
Delhi City	581	71.40	23.80	4.30	0.50	100
Jalgaon	338	53.55	32.25	10.35	3.85	100
Jamshedpur	691	73.66	20.69	4.92	0.73	100
Jharia	999	26.23	52.55	15.42	5.80	100
Jubbulpore	482	51.04	36.51	8.71	3.74	100
Sholapur	778	45.37	35.09	13.37	6.17	100

The table on the next page which we owe to the Family Budgets of Industrial Workers Enquiry Reports brings together the data for average monthly family incomes and expenditures. This table taken by itself does not give us a correct idea of the

1 Compiled from Family Budgets of Industrial Workers Enquiry Reports, (1944-45), Government of India.

2 *Ibid.*

Analysis of some Family Budgets of Industrial Workers in India[1]

Percentage expenditure on main consumption groups

Locality	Number of Budgets	Average monthly income Rs. as. ps.	Average monthly expenditure Rs. as. ps.	Food	Clothing and Foot-wear	Rent	Fuel and Lighting	Household Requisities	Miscella-neous	Balance Rs. as.ps.	Interest on Loans, Insurance Premia, Remittances to dependants, etc.
Ahmedabad	1,820	134- 5- 8	95-15- 4	52.73	12.51	5.40	8.99	2.11	18.26	+ 38- 6-4	3- 4-2
Bombay	2,030	97- 2- 3	86- 8- 0	51.96	11.72	7.20	10.16	0.50	18.46	+ 10-10-3	2-12-0
Calcutta	2,707	16- 6- 5 (weekly)	16-10-11 (weekly)	65.66	7.65	6.71	7.28	0.15	12.55	— 0- 4-6	0-10-2
Cuttack	168	43- 8- 0	59- 0- 9	67.15	6.88	2.97	8.86	1.64	12.50	— 15- 8-9	0- 6-0
Delhi City	581	66- 4-11	60- 9- 6	60.98	9.13	6.35	8.84	3.27	11.43	+ 5-11-5	2- 9-0
Jalgaon	338	60- 2- 5	60-11-10	56.57	17.44	3.82	8.68	0.45	13.04	— 0- 9-5	0- 5-4
Jamshedpur	691	92-13- 3	67-15- 6	65.76	10 07	4.69	5.43	0.36	13.69	+ 24-13-9	17- 2-8
Jharia	999	12- 1- 6 (weekly)	9-14-10 (weekly)	77.70	6.56	nil	0.47	0.63	14.64	+ 2- 2-8	0-11-4
Jubbulpore	482	64-10- 9	63-10- 6	58.24	11.62	2.70	7.22	1.76	18.46	+ 1- 0-3	4- 0-8
Sholapur	778	66-15- 6	77- 7- 4	48.75	14.57	3.64	12.20	0.96	19.88	— 10-7-10	—

1 Compiled from Family Budgets of Industrial Workers Enquiry Reports, (1944-45), op. cit.

economic condition of the working class population in industrial centres. All that it tells us is that taking an average income of Rs. 73 per month, about 60 per cent of the income is absorbed in food which works out an expenditure of Rs. 44 per month for the family. Taking an average family to consists of four persons, the expenditure on food *per capita* every month would be Rs 10.5. It is obvious that the average factory worker consumes less than he requires for the maintenance of health and vigour. Diet charts recently prepared lay down a minimum expenditure of Rs. 14 per month on food alone, whether vegetarian or non-vegetarian.

If we consider the first four items of expenditure in the table supplied, the average expenditure amounts to over 75 per cent of the total income. If we include other necessary expenses like washing, bedding and household articles, the percentage will increase to 85. Thus the proportion spent on the necessaries of life is evidence of the inadequacy of the wages and of the narrow margin between subsistence and semi-starvation. It is interesting to note in this connection that the industrial workers during 1944-45 spent a larger proportion of their income on food despite higher wages as compared with the period of earlier enquiries during 1921-30 reported in the Geneva Report.

The studies on food consumption of workers conducted by the Bombay Labour Office, which were based upon investigation of 2,473 family budgets showed that the average adult male worker consumed less of almost every commodity than is prescribed for the inmates of Bombay jails.

The following table gives us comparative figures:—[1]

Articles in 2,473 family budgets of working class families in Bombay (in lbs.)		Daily consumption in Bombay jail per adult male (in lbs.)		Daily consumption by Madras Textile Workers (in lbs.)
	Textile Workers	Hard Labour	Light Labour	
Cereals	1.29	1.5	1.38	1.13
Pulses	.09	.27	.21	.07
Beef and mutton	.03	.04	.04	—
Salt	.04	.03	.03	.05
Oils	.02	.03	.03	.03
Others	.07	—	—	.09
Total	**1.54**	**1.87**	**1.69**	**1.37**

As jail diet is considered to be on the borders of a subsistence minimum it is evident that the factory worker in India lives

1 Report on an Enquiry into Working Class Budgets in Bombay, 1923, pp. 19-20. Last column is taken from Kuczynski, op. cit. p. 135.

below the margin of subsistence, and his food condition as a free labourer is worse than that of convicts. This is borne out by the following table:—[1]

Comparative Body-Weight of Spinners in Mills and Prisoners in Jails (in lbs.)

Province	Average Weight of Spinners	Average Weight of prisoners	Difference
Bombay	102.09	112.12	10.03
Central Provinces	100.92	110.45	9.53
Unites Provinces	107.01	115.08	8.07
Bengal	107.93	115.05	7.12
Eastern Bengal & Assam	108.00	110.85	2.84
Punjab	113.08	115.05	1.97
Madras	113.64	114.38	0.75

We may well be permitted to doubt if the condition of industrial workers in India definitely improved during the fifty years (1880-1938). We reproduce below a table from Dr. Kuczynski's work:—[2]

Money Wages, Cost of Living and Real Wages (1900=100)

	Money Wages	Cost of Living	Real Wages
1880-89	97	69	127
1890-99	94	85	112
1900-09	107	97	111
1910-19	135	143	98
1920-29	211	207	103
1930-38	184	143	129

Money wages up to the end of the first world war showed a fairly uniform tendency to rise; real wages on the other hand indicate a tendency to decline. During the first world war and the early post-war years, money wages rose rapidly, while real wages declined. During the thirtees real wages had an upward trend, but the rise in real wages has been regarded as deceptive. "For the wage data refer to gross wages, and do not take into account the gigantic wage losses through unemployment and short time in the early thirties. Net money wages, if one could compute them, would show that real wages in the thirties are considerably below the level of the eighties."[3]

The intensity of work, moreover, has been much greater than 60 years ago, as indicated in the following table:—[4]

1 Kuczynski, op. cit., p. 136.
2 *Ibid.*, p. 132.
3 *Ibid.*
4 *Ibid.*, p. 129.

Factory Production, Factory Employment and Productivity (1919-23=100)

Years	Production	Employment	Productivity	Productivity in Mines
1919-23	100	100	100	100
1924-28	119	117	102	118
1929-33	134	114	118	127
1934-38	181	126	144	127

An increase in the percentage of industrial workers is accompanied by increase in production. According to Dr. Kuczynski, "There are few countries in which we can observe such an increase of productivity as in India." This is likewise to be related to diminution in hours of work per day and per shift. "If we take into account the decline in the number of hours worked, and if we compute an index of productivity per hour, then we find that productivity in the factories has increased by considerably more than 50%, while that in mines has increased by more than one-third."[1] The increase in the intensity of work is also evidenced by the rapid increase in the rate of accidents in India, a rate unprecedented, as we have said, in the history of capitalism.

The following table reveals the decline in real wages between 1939 and 1945 in British India:—[2]

Average Annual Earnings and Cost of Living in India, 1939-45

	Earning in Rupees		Percentage increase in 1945 over	Increase in cost of living index
	1939	1945	1939	1939=100
Bombay .. .	370.4	814.5	120	224
Madras .. .	175.9	357.6	103	228
British India .. .	287.5	595.5	107	277

These figures might well challenge the capitalist contention that the workers have improved their position during the last war.

The Indian Labour Gazette provides the following table of index of real earnings of factory workers in the period 1945-49:—[3]

1944=100

	1945	1946	1947	1948	1949
Index of earnings ..	100.3	102.9	125.5	150.6	168.5
Cost of living index ..	100	106	120	134	138
Index of real earnings ..	100.3	97.1	104.6	112.4	122.1

The real earnings of factory employers increased by 22 per cent between 1944 and 1949. As there is no authoritative all-

1 *Ibid.*
2 Economic Survey of Asia and Far East, 1947, U. N. 1948, p. 144.
3 Table III, *Indian Labour Gazette*, February, 1953, p. 640.

India estimate regarding increase in the cost of living of factory workers between 1939 and 1944, the movements of real earnings between these years cannot be precisely determined. But considering the fact that the cost of living indices for 1944, with base August 1939 = 100, stood at 226 for Bombay, 290 for Ahmedabad, 314 for Kanpur, 267 for Nagpur and 207 for Madras, and that the all-India index for earnings for 1944 was 205, with 1939 as base, it may be fairly safely presumed that real earnings had declined considerably, and it is possible that even in 1949, the level of real earnings was a little behind the 1939 level. "By 1948-49 the average real earnings of factory workers were still about 7 per cent below pre-war. In 1949-50, the preliminary figure increased to 4 per cent above pre-war, but may not reflect the true conditions of workers' living, which may have deteriorated with sharp reductions in food rations due to growing food scarcity."[1]

Indebtedness

The fact that the industrial workers are sunk in debt as much as the agricultural classes is fully recognised by the Labour Commission. "We are satisfied that the majority of industrial workers are in debt for the greater part of their working lives. Many are born in debt....many come to industry because they are in debt....It is estimated that in most industrial centres the proportion of families or individuals who are in debt is not less than 2/3 of the whole. We believe that in the great majority of cases, the amount of debt exceeds three months' wages and is often far in excess of this amount....A debt of even one-fourth of a year's wages is a heavy burden, particularly to a man whose income is little more than sufficient for his bare necessities. But the burden is aggravated out of all proportion by the rate of interest which has to be paid. A common rate is one anna in the rupee per month. This is 75 per cent per annum."[2] "One anna per rupee is a conservative estimate of the average payment; one month's wages in the year is probably a more accurate guess....But whatever the figure, the result is almost invariable; the indebted worker has to give all of what might otherwise be his saving to the moneylender; and these payments are not merely the surplus that would be spent on petty luxuries; they have often to be provided by trenching on the primary needs of a healthy life."[3] The

1 U.N.O. Survey quoted in *Eastern Economist*, Annual Number, 1950, p. 75.
2 Report, p. 224.
3 *Ibid.*, p. 226.

report of the Special Officer on the standard of living of jute mill workers stated that the maximum interest charged was 325 per cent or one anna per rupee per week. The average rate of interest was 78 per cent. The enquiries made for the Royal Commission into the standard of living in the United Provinces gave 75 per cent as the commonest rate in Kanpur.

The various family budget enquiries undertaken by the Government of India reveal that the rate of interest varied from 1 per cent to 300 per cent. In Jamshedpur, where the average monthly earnings are high, 430 out of 691 families were in debt, the average amount of debt being Rs. 234. The report remarks: "The Pathan seems to be doing a flourishing trade in Jamshedpur, and that partly accounts for the large amount which investigation shows an average family has to pay per month by way of interest charges."[1] In Bombay, out of a total of 2,030 families investigated, 1,301, that is, 64.1 per cent were found in debt. The report observes: "It would appear that indebtedness among the Bombay working classes has diminished somewhat, because the 1932-33 inquiry had revealed that no fewer than 74.74 per cent of the families were in debt. The average debt per family reporting indebtedness, according to the present enquiry, comes to Rs. 123 as compared to Rs. 175 as revealed by the 1932-33 investigation."[2] The rate of interest varied from 4 to 150 per cent.

The Rege Committee, summing up the analysis of indebtedness of industrial workers, observe: "In some cases indebtedness may no doubt be due to extravagance, vice and improvidence; but it would appear that the root cause of the evil is the want of any margin left for meeting expenditure of an unforeseen character. It is true that one of the main causes of indebtedness is the expenditure incurred on marriage, funeral etc........The worker is a part of a social organisation, and has perforce to conform to certain customary social standards even when he is not in a position to do so."[3]

In view of this serious cut in the worker's income on account of the burden of debt, it would be misleading to assume that money wages are in any sense a measure of their standard of living. There are employers who have contended that the Indian worker has a fixed standard of living which is on a low

1 Report on an Enquiry into Family Budgets of Industrial Workers in Jamshedpur, p. 25.

2 Report, p. 36.

3 Report, p. 293.

level, that when he has earned enough to maintain that level, he is satisfied and has no further inclination to work, and that increased rates of wages do not have the results which they have in other countries. This view is sometimes generalised when we have been told of the "uneconomic" outlook on life which marks all classes of people in India. It may be admitted that there are workers in India, as there are in other countries, lacking in ambition and a desire to improve their standard of life. It may also be said that there is a willingness to put up with sufferings which it is difficult to reconcile with an incentive to work. But the generalisation about all Indian workers is obviously based upon the narrow and limited experience of employers in coal mining and tea gardens, where the workers come from villages and are anxious to go back to the villages to cultivate their fields and join their families after having earned enough to carry with them a small amount of savings.

Health and Housing

When we turn from the indebtedness of the workers to their health in industrial centres, we are faced with another problem of a serious character. As early as 1918, the Industrial Commission, discussing the conditions of labour in towns observed: "There is substantial agreement between the best informed witnesses that the remedies are a rise in the standard of comfort and improvement in public health. These ends can be attained only by education, improved housing, and a general policy of betterment, in which an organisation for the care of public health must play a prominent part...... But housing is a most urgent necessity."

Thirteen years later, the Royal Commission on Labour repeated the same story of neglect and indifference, both on the part of employers and the Government, to the question of the health and housing of the working population. "We feel that the time for inaction and delay is past and a beginning should be made."[1] And again, "There can be no doubt that particularly with regard to housing, it is imperative that immediate action is urgently necessary to counteract the serious effect on the health of the workers for which present conditions are responsible. Evidence is not lacking that part of the labour unrest which has characterised industrial development during recent years is due to the realisation, however vague, on the part of the

1 Report, p. 244.

worker that his standard of living is too low, and that he can never hope to raise that standard until his home provides him with a degree of comfort which is at present beyond his reach."[1]

Eight years later again, we have the report of the same story of neglect and indifference. "The housing conditions," states the Geneva Report on Industrial Labour, "of the majority of the industrial workers of India are deplorable." And after a decade, the Rege Committee observed: "No attempt at raising the standard of living of the industrial worker can be successful without an early solution of the housing problem."[2]

The housing conditions in industrial centres have deteriorated terribly due to overcrowding during the war and post-war periods. This must have worsened the housing problem for industrial workers.

Realising the gravity of industrial housing, the Central Government decided in April, 1948, to construct a million houses for workers within ten years. A modified scheme was announced in 1949 due to financial stringency under which loans were provided to State Governments. A scheme of subsidised industrial housing was announced at the end of 1952 under which the Central Government would undertake the major financial responsibility, besides providing raw materials and transport facilities. Almost all the States following the lead of the Central Government are launched on a programme of industrial housing and some of them have enacted the necessary legislation. Statutory Housing Boards have been set up in Bombay, U.P., Madhya Pradesh and Bihar. The Five Year Plan has allocated a sum of Rs. 48.69 crores for housing, out of which the Central Government will spend Rs. 38.5 crores and the State Governments the remaining Rs. 10.19 crores.

Food and Diet

We have already referred to the bearing of food and diet on the health of the worker. The Indian factory workers find it difficult to work for long hours, partly owing to physiological defects caused by the inadequacy both of the quality and quantity of his diet. The following table gives us a comparative idea of the dietary conditions of the workers in different countries:—[3]

1 *Ibid.*, p. 294.
2 Report, p. 297.
3 "Industrial Problems of India," edited P. C. Jain, 1942, p. 215.

		Japan 1927	U.K. 1934	Madras Presidency 1933
Protein animal	(in grammes) ..	15.9	46	2.6
Protein vegetable	(„) ..	72.6	41	40.0
Total Protein	( ) ..	88.5	87	42.6
Fat animal	( ) ..	33.5	109	1 3
Fat vegetable	( ) ..	14.2	15	36.5
Total Fat	( ) ..	47.7	124	37.8
Carbohydrates	( ) ..	537.6	425	398.5
	Calories ..	2,732	3,246	2,068

The 1923 enquiry, of the Bombay Labour Office revealed that the Bombay worker, who is certainly much better off than others, consumed food below the jail rations. A further enquiry showed an extra consumption of cheap sweetmeats, fish, vegetables, etc., amounting to an additional 4.6 per cent of the food balance which was equivalent to 113 calories. Thus the Bombay adult worker consumed 2,563 calories.[1] It is interesting to compare this with the minimum of 3,390 calories laid down by the British Medical Association's Sub-Committee on Nutrition and the minimum of 2,800 calories required in Indian conditions as calculated by Radha Kamal Mukerjee.

During the war period, there is no doubt that the total calorie intake of industrial workers was severely reduced, due to general food shortage and the consequent introduction of rationing. The Health Survey and Development Committee appointed in October 1943 reported in 1946 that the diet of workers in factories, mines and plantations was generally of a low standard, and lacked the essential nutritive elements. The staple diet of workers in Madras and Bengal was particularly of a low quality. Milk consumption was unsatisfactory in all parts of the country. The average level of wages in Bombay and Ahmedabad being higher, a more nutritious diet was available for workers in these two cities than in other parts of India.[2] The National Sample Survey reports "a definite fall in the intake of foodgrains among working families in urban areas."[3]

The problem of diet of industrial workers is an aspect of general malnutrition in the country as a whole. The fall in productivity exhibited in recent years has to be mainly attributed to lack of adequate diet. In the post-war period, the Partition and other factors led to a severe crisis in food which further reduced the levels of nutrition. The average calorie

1 *Bombay Labour Gazette*, April, 1925.
2 Report, Vol I, p. 81.
3 General Report No. 1, 1952, p. 30.

intake in 1949-50 was about 1,702, as compared to 1968 for 1938-39. According to the Year Book of Labour Statistics,[1] the total amount of calories available from food supplies at the retail level of 1950-51 was 1,572 for the Indian Union which is even lower than the pre-war level.

Exhaustion and illness among the workers is one of the reasons why industrial capitalism in India is faced with shortage in labour in a thickly populated country. "The workers are unable or unwilling to stand working conditions in the factories for any length of time....In the Jharia mining area, for instance 90% of the adult workers were infected by hook-worm."[2] "Large numbers of people suffer from ill health arising from malaria, hook-worm and other diseases, which sap their vitality, as indicated by the high death rate."[3] We may sum up in the words of Kuczynski: "Underfed, housed like animals, without light and air and water, the Indian industrial worker is one of the most exploited of all in the world of industrial capitalism."[4]

Profits

In contrast to the miserably low wages paid to the workers, the profits derived by the capitalists are striking.

The delegation of the Dundee Jute Trade Union to India reported in 1925 about the Jute industry that the total gain to the shareholders in a decade (1915-1924), taking the Reserve Funds and Profits together, amounted to £300 million, that is, 90 per cent per annum of the capital, the average wage being £12-10 per annum. (The Jute Industry employed 300,000 to 327,000 workers).[5]

Out of 51 jute mills, 32 paid as much as 100 per cent as dividend in one or more years between 1919 and 1927; 29 never paid less than 20 per cent and 10 never less than 40 per cent. The early post-war years showed the profits of jute mills ranging from six to eight times their total wages bill. For every £12 that they paid in wages to their Indian workers, they remitted £100 in profits to their shareholders in Scotland.[6]

The average dividend paid by the leading jute mills was 140 per cent, the highest being 420 per cent. The leading jute mill (Gourepore) paid 250 per cent in 1918, 420 per cent in

1 12th Edition, I. L. O. 1952, p. 278.
2 Kuczynski, op. cit., 138.
3 Geneva Report, p. 190.
4 Op. cit., p. 137.
5 Johnson and J. F. Sime, "Exploitation in India," pp. 5-6.
6 Brailsford, "Property or Peace," 1934, p. 221.

1919, 120 per cent in 1924, 50 per cent in 1934 and 1935 and 35 per cent in 1939, giving an average of 88 per cent for 1918-39.[1]

The Tariff Board enquiry in 1927 reported regarding the cotton industry as follows: "An examination of the balance sheets of the Bombay mills shows that for 1920, 35 companies comprising 42 mills declared dividends of 40 per cent and over, of which 10 companies comprising 14 mills paid 100 per cent and over, and 2 mills paid over 200 per cent. In 1921, the number was 41 companies comprising 47 mills, out of which 9 companies comprising 11 mills paid dividends of 100 per cent and over."[2]

The Golden Jubilee Booklet of the Empress Mills at Nagpur in 1927 speaks of big dividends paid to the shareholders. "In general it is interesting to note that the total profits of the Empress Mills upto the 30th June, 1926, aggregate over Rs. 92,214,527, which is nearly 61 47 times the original ordinary share capital; and upto the same date, the company has paid Rs. 59,431,267 in dividends on ordinary shares which works out at 80.86 per cent per annum on the originally subscribed capital....The original shareholder has consequently gained, by being the first fortunate allottee of a share of the paid up value of Rs. 500 in the company, 2.05 shares given gratis worth to him Rs. 7,838 on the basis of the present market value.... It has brought him Rs. 19,810 in the shape of dividends." The average dividend paid by important cotton mills in 1920 was 120 per cent, the highest figure being 365 per cent.

If we turn to collieries, we find the dividends declared by coal mines equally striking, though not so high as with the cotton mills. "Coal mines have been known to pay 100 and 120 per cent (as dividends) on a daily wage of 8d."[3] The Katras-Jharia mines paid 120 per cent in 1918, 1919 and 1920, 160 per cent cent in 1921, 150 per cent in 1923, dropping to 10 per cent in 1936, giving an average of 70 per cent for 1918-37. About 25 per cent of the mines paid dividends exceeding 15 per cent for a long period. So also the tea companies. The sterling companies—the Amalgamated Tea Estates and the Consolidated Tea and Lands paid 52½ per cent and 29 per cent average dividends respectively during 1924-28. The rupee companies—the Bishunath Tea Co., Hasimara Tea Co. and Patrakola Tea Co paid an average dividend of 30½

1 Dr. M. H. Gopal, "Trend of Profits, A Factual Analysis," pp. 19 and 23.
2 Report, Vol. I, 1927, p. 83.
3 Brailsford, op. cit., p. 221.

per cent, 30 per cent and 96 per cent respectively during the same period. A firm of relatively enlightened employers like the Tatas has also an interesting story to reveal. The managing agents, Tata Sons Ltd., of the Tata Iron and Steel Works, are entitled to a remuneration at 5 to 9 per cent of the net profits, according to the amount of dividend paid to shareholders, with a minimum of Rs. 50,000.

The following table shows over a number a years the relative increases in the workmen's earnings and the managing agent's (Tata Sons Ltd.) remuneration:[1]

Year	Workman's earnings including bonus Rs.	Managing Agents Remuneration Rs.
1927	27.85	50,000
1929	35.35	50,000
1933	36.56	50,000
1937	42.17	50,000
1938	42.63	33,71,831
1939	....	40,53,531

Dr. M. H. Gopal, from whose recent study of the Trend of Profits, we have drawn many of our figures on profits, points out that the average rate of profits for any group of enterprise hides the phenomenal gains made by some of the industrial firms. Comparing the trend of profits in India with the trends in the United Kingdom and the U.S.A., he obtains the following significant figures:

Average Earnings (all types of enterprises)
1919-28

India	17.1%
United Kingdom	10.5%
U.S.A.	10.6%

There is a similarity in the rate between the United Kingdom and the U.S.A., whilst there is a marked difference between India and the two other countries. The difference is equally marked when the full 20 year period (1918-37) is taken into account. Whilst the average dividends for all types of enterprises in the U.K. was 9.2, in India it was 14 per cent. Even comparing the profit rates in different industries in the two countries, we find that only two industries in the U.K. have declared more than 15 per cent for the whole period. In India, six industries have had an average rate exceeding 15 per cent, three have had a rate exceeding 20 per cent, while jute passes the 40 per cent limit for the whole period.

1 Radha Kamal Mukerjee "The Indian Working Class," 1945, p. 150.

It is thus clear that the rate of profits in India is very much higher than elsewhere; in fact "Indian dividends are about 50 per cent higher than in the U. K."[1] The phenomenally high profits in our country were not due to any abnormal conditions like the war. The high rate of profits has been a persistent phenomenon, specially noticeable in a few industries accentuated during the war.[2] This can be seen from the following table showing dividends paid by a few companies between 1936 and 1944:[3]

	1936	1937	1938	1939	1940	1941	1942	1943	1944
Cotton textiles in 000 Rs.	98	1,13	1,37	1,19	1,50	2,73	4,69	6,45	5,41
Index Nos.	71	82	100	87	107	199	342	470	395
Sugar in 000 Rs.	1,28	97	1,19	1.18	1,02	1,40	1,60	2,46	2,12
Index Nos.	108	82	100	99	86	1,18	135	207	1,78
Cement in 000 Rs.	—	—	19,00	18,69	18,69	24,09	31,14	25,74	28,49
Index Nos.	—	—	100	98	98	1,27	164	135	150

Profits during Second World War and Post-War Years

The war enormously inflated profits as can be seen from the following table:[4]

Index numbers of average net profit in 1943 in different industries
1939=100

Jute	926	Coal	124
Cotton	645	Engineering	225
Tea	392	Miscellaneous	401
Sugar	218	All kinds	327

The increase in dearness allowance was refused in every industry during 1944. The Government of India in its concern began freezing part of the wages for the duration of the war. The impact of soaring prices and the inadequacy of the dearness allowances to keep up with the cost of living can be seen from the fact that in 1943 the working days lost in strikes were 1,291,000, whereas upto October 1944 they were 3,779,000 days.[5]

The textile industry made record profits during the last war, and was phenomenally prosperous in spite of the fact that about 80 per cent of the profits were taken away by Government through taxation. All-India data for profits made by textile mills are not available, yet the profits made by Bombay mills in 1941 are an indication of the general prosperity of the industry. As against the profit of 50 lakhs of rupees in 1940, the profits for 1941

1 Dr. M. H. Gopal. op. cit. pp. 33-36.

2 These profits do not include the remuneration which the Managing Agents charge under a variety of heads.

3 Industrial Profits in India, M. C. Munshi, 1948, p. 45.

4 *People's War*, 21st January, 1945.

5 *Ibid.*

was 694 lakhs, an increase of 1,288 per cent over 1940. A few selected mills in 1942 made profits which showed an increase of 2,250 per cent over the figures for 1940. The average dividend rate of 70 mills for 1942 was 27 per cent.[1] According to Mr. K. K. Desai, the Congress labour leader, the cotton textile industry made profits in 1943 which worked out at nearly 2,000 per cent of the prewar profits, and the average profits over seven years nearly 1,000 per cent. But "the employees working in this industry have not been given a fair deal, and their interests have been sacrificed at the altar of private profits." "The dearness allowance paid to the employees ranges from 50 to 75 per cent only as compensation for rise, except perhaps for Ahmedabad where, through organised struggle, the employees have been able to get nearly 100 per cent compensation for the rise in the cost of living, and even this solitary case of justice was upset by the millowners, through an award of the Industrial Court which reduced it to 76 per cent on the plea that other centres are not getting full compensation."[2] The Ahmedabad mill-owners might well be congratulated on their humanitarian (!) action in 1944 when they proposed to cut off 45 per cent in the dearness allowance to the workers and would have enforced it but for the decision of the Industrial Court.

The following table shows profits in certain industries during 1947-49:—[3]

Statement of Industrial Profits Index, 1947-49
1939=100

Year	Jute.	Cotton	Iron and Steel	Tea	Sugar	Paper	Coal	Cement	All Industries
1947	313.2	317.7	86.1	216.3	171.5	167.6	171.8	142.5	191.6
1948	316.2	548.1	96.3	127.9	381.3	257.0	201.0	252.6	259.9
1949	89.3	292.0	116.0	138.4	216.4	316.7	287.2	295.0	181.5

Despite the fall in profits as compared to peak war profits, they are substantial, while despite increase in earnings, the standard of living of workers remains below the pre-war level.

The net profits made by the cotton textile inlustry are estimated at Rs. 76 crores in 1948-49, 34.4 crores in 1949-50 and 27.6 crores in 1950-51 on the total paid-up capital of Rs 67.59 crores. Thus, the profits in 1948-49 were 110 per cent, 50 per cent in 1949-1950 and about 40 per cent in 1950-51. The jute industry during these years made a profit of nearly 80 per cent, 27 per cent and

1 Harkisandas Lukhmidas, "Indian Textile Industry during the War," 1944.

2 "Indian Textile Industry, War Period. 1940-46" by K. K. Desai, pp. 7-8 and Rejoinder to the statement of Millowners and Cloth Control Board, p. 2, 1947.

3 Explanatory Memorandum, Budget Estimates, 1952-53 quoted in "Crisis of Indian Economy," B. T. Ranadive, 1953, p. 150.

nearly 46 per cent respectively on an invested capital of Rs. 29.48 crores.[1]

Such colossal profits show that the capitalistic development in India is going on according to the inexorable laws of capitalism. The exploitation of labour, in spite of the experiences of Western industrialism with its accompanying evils, goes on merrily in India as a result of the policy and traditions of *laissez-faire.* Many industries enjoy the present prosperous position as the result of sacrifices of the masses. And yet, when one raises the question of minimum wage—not to talk of a living wage standard—or progressive labour legislation, there is a big hue and cry against it and the plea of inability of the industry to bear the burden is always put forward.

Indian employers and capitalists have always urged the plea that they were sincerely anxious to improve the conditions of Indian labour. Their anxiety, however, to improve these conditions was limited by their desire to earn profits. "The capacity of the industry to bear" has been their criterion for determining what they might do for improving the conditions of labour. These benevolent minded industrialists talk also of the burden on the community consequent upon an increase in the cost of production brought about by higher wages to workers.

To charge commissions as managing agents equivalent at times to the total profits, to distribute dividends at rates varying from 15 to 20 and 30 per cent or more and then to urge the plea of "what the industry can bear" is only possible in a country where public opinion does not exist and where labour is not sufficiently well-organised.

Bonus and Profit-Sharing

One of the provisions of the Industrial Truce Resolution of 1947 required employers and workers to agree on a scheme of profit sharing in industry. But due to opposition from employers and apathy on the part of workers, no attempt was made to introduce such a scheme. It has been pointed out that one reason for this apathy is the prevalence of a system of annual bonus payments. In a number of industries workers annually receive a bonus assessed according to the profits of the previous year. Disputes over bonus payments have led Industrial Courts to make

1 B. T. Ranadive, op. cit. p. 151.

It should be noted that the figures of profits during the war and post-war periods given in these tables do not include the huge illegal profits made by many capitalists by evasion of controls and by blackmarketing. Some light may be thrown on this if the Income Tax Investigation Committee would publish all the details of their findings.

awards requiring employers to pay bonuses which are regarded by workers as a form of deferred wages. It has been not inaptly regarded as a form of profit sharing.

The Tata Iron and Steel Company has recently introduced a revised profit sharing scheme, giving the employees a share of 27½ per cent of the annual net profits of the Company; and this share is credited to and/or distributed in proportion to the basic salaries and wages earned by them. About 25 per cent of the gross amount of the bonus is credited to the Provident Fund accounts of the employees. The Expert Committee on Profit Sharing appointed by Government reported in September, 1948, recommending, *inter alia*, the allocation of 10 per cent of net profits for reserves, a return of 6 per cent on paid-up capital plus reserves, and sharing by labour of 50 per cent in surplus profits. The Committee suggested the application of these recommendations to six industries, namely, cotton textiles, jute, steel, cement, manufacture of tyres and cigarettes in the first instance. The Cawnpore Electric Company award gave a share in the Reserve Fund to labour. This was later negatived by the High Court. This has, however, led in recent years to capitalisation of reserves by the issue of bonus shares, which results in depriving labour of a rightful share in the built-up prosperity of the concern.[1] The Coal Mines Bonus Scheme formed by Government in July, 1948, under the Coal Mines Provident Fund and Bonus Scheme Act, 1948, has been made applicable to all coal mines in West Bengal and Bihar with effect from 21st May, 1947, and to coal mines in Madhya Pradesh and Orissa from 10th October, 1947; the employees qualified for the bonus get one-third of their basic earnings as bonus.

Concluding Remarks

If, during the last war period, rise in wages, allowances, bonuses, etc. were given—much is made of it by the capitalists—it was not out of a spirit of generosity, but because it enabled them to reap a rich reward of high profits due to inflated prices and war contracts.[2] And even for this, labour had to struggle hard and Government was compelled to intervene in the interest of war effort.

With poor housing conditions, with the lines of barracks of a most insanitary character built in the name of improved or model

1 The Planning Commission have expressed the pious hope that restrictions should be imposed on the issue of bonus shares. Two years later we find the Government of India continuing their blessings on such issues.

2 The Ahmedabad millowners had announced in June, 1945, that all dearness allowance would be stopped, as agreed upon, now that the war in Europe had ended; but luckily for the workers, the Industrial court intervened.

dwellings, sunk in indebtedness, living on a diet inviting diseases of all kinds, the industrial factory workers live in an environment which in other countries would be favourable to a revolutionary outburst. But, in India, the workers, illiterate and uneducated as they are, have—shall we say fortunately?—not yet grown alive to the value of organisation and mass action.

Gandhiji always insisted on the need for evolving harmonious relations between capital and labour. But clearly such harmony is inconceivable, unless certain fundamental rights are guaranteed to labour. These would include (1) the right to an adequate wage, (2) the right to decent housing conditions, (3) the right to education and opportunities for healthy recreation, (4) the right to influence industrial policy, and, above all, the right to share increasingly in man's triumphs over the environment, in man's increasing ability to command, as a result of his economic endeavour, not merely a bare competence, but a surplus. J. S. Mill, commenting on the results of machinery, observed gloomily about a century ago: "It is doubtful if machinery has lightened the labour of a vast majority of our workers." Economic progress has no meaning if it does not mean a higher standard of life, and more important still, greater leisure for creative work.

Perhaps, our entrepreneurs and capitalists, whose outlook is not different from the outlook of British employers in the Victorian Age, are as indifferent to the problems of Indian labour under a free and independent India as they were in the past. In the field of industrial organisation, as in the field of agricultural development, the hope for the future lies not in the direction of private enterprise and enlightened self-interest, but in a larger vision, animating our Government and pointing in the direction of socialised industries worked in the interest of the country as a whole.

CHAPTER XXII

LABOUR LEGISLATION IN INDIA

It was a characteristic of early labour legislation in India that it was enacted to meet the needs of particular industries at different times. No need was felt for a uniform policy in labour legislation. Under the 1950 Constitution the following subjects are matters for concurrent legislation by the Central and State legislatures:

(a) Trade Unions; industrial and labour disputes.

(b) Social security and social insurance; employment and unemployment.

(c) Welfare of labour, including conditions of work, provident funds, employers' liability, workmen's compensation, invalidity and old age pensions, maternity benefits.

(d) Vocational and technical training of labour.

(e) Relief and rehabilitation of refugees.

The following subjects fall exclusively under the Centre:—

(a) Regulation of labour and safety in mines and oil fields.

(b) Industrial disputes concerning employees of the Central Government.

Under the exclusive State list is legislation concerning relief of disabled and unemployed.

Early Legislation

The extension of the franchise in 1937, and the establishment of popular ministries in the Provinces aroused public interest and a more sympathetic attitude to the problems of labour. Since 1937, a large number of labour laws were enacted both by the Central Government and in the States. They covered such wide ground as employment of Children's Acts, regulation of working conditions in factories and workshops, extension of such regulations to employees in shops and commercial establishments, protection to women workers against the risks of maternity and industrial disputes. These laws, however, were applicable to organised industries in British India only. As Shiva Rao observed: "In fact, taking all labour legislation into account, affecting factories, mines, plantations, docks, railways, harbours, etc., it is doubtful whether more than 7 or 8 million at the outside would come within its protective influence. The rest, who constitute by far the great majority of the industrial workers, are engaged in small, or what are known as unregulated industries."[1]

There arose a need for uniformity in labour legislation, due partly to diversities in the regulations and partly to the existence of concurrent jurisdictions between the Centre and the States. To this was to be added the need for strengthening India's war efforts by removing some of the sources of conflict between capital and labour. Accordingly in August, 1942, the Government of India set up a permanent Tripartite Labour Organisation, composed of representatives of the Central, Provincial and Indian

1 Op. cit. p. 210.

State Governments, as well as of employers and workers, with a constitution modelled on that of the International Labour Organisation with the following objects: (1) the promotion of uniformity in labour legislation; (2) the determination of a procedure for the settlement of industrial disputes; and (3) consultation on all matters of industrial interest affecting the country as a whole. The organisation consists of a Standing Committee and a plenary conference presided over by the Labour Member. The Committee consists of ten Government, five employers' and five workers' representatives. The working of this machinery led to a remarkable extension of labour legislation.

Legislation after 1947

The advent of Independence gave a fresh impetus to labour legislation. There was, however, no uniform policy in labour matters due to the distribution of legislative powers between the Centre and the Provinces. The labour problem needs to be treated as one affecting all parts of the country, and therefore, on a national basis. The Rege Committee opined: "The time has now arrived to take stock of things and to launch upon a bolder and more comprehensive labour policy, and to this end, to consolidate and extend the labour laws into a labour code....and provide minimum standards of legal protection for ensuring the economic stability and social well-being" of the working classes.[1]

The Labour Department under Mr. Jagjivan Ram drew up a five year labour programme based upon the Reports of the Royal Commission of 1931 and the Rege Committee, 1946, for the improvement of labour conditions by legislative and administrative measures. The programme aimed at co-ordinating the labour enactments of the States and at evolving a common policy for the whole country, at promoting social security and industrial peace and guaranteeing satisfactory conditions of work and fair wages to all workers whether in industries, agriculture or commercial concerns, organised or unorganised.

A series of amendments to the Factory Acts gave workers a 48 hour week, annual holidays and canteen facilities. The Industrial Employment Act, 1946, required industrial establishments to adopt regular standing orders. The Industrial Disputes Act, 1947, provides for the peaceful settlement of disputes The Trade Unions Act, 1947, provides for the compulsory recognition of Trade Unions by employers. The Employers' State Insurance Act, 1948, introduced a scheme of

1 Report, p. 387.

accident, maternity and sickness insurance for factory wage earners. The New Factory Act, 1948, widened the scope of the old Act. The Minimum Wages Act, 1948, provides for the fixation of minimum rates of wages in a number of employments, including agriculture. We may add to this list the Industrial Disputes Act, 1950, the Plantations Labour Act, 1951, the Employees Provident Fund Act, 1952 and the Mines Act, 1952. A Labour Bureau has been set up for collection and maintenance of relevant labour statistics. Employment exchanges established in the post-war period, specifically to deal with the problems of demobilisation, have been made permanent, with their scope enlarged. Despite good progress in labour legislation, the pace of which has been regarded by the capitalists as too rapid, it has to be recognised that "the pace of labour legislation cannot be slackened, as long as possibly unfair or unsatisfactory conditions of employment continue to exist."[1]

We review briefly some important legislation:

Factory Legislation

Cotton mills in India were established early in the second half of the last century, and with time the conditions under which women and children were employed in these factories aroused public attention. Lancashire cotton interests were concerned at the new competitors in the Indian market. The majority of the Factory Commission appointed by the Government of Bombay in 1875 was opposed to legislative intervention. But the Government of India passed the Act of 1881, which made provisions relating to health and safety, and limited the employment of children in factories. Dissatisfaction with the provision for the protection of children and the absence of any regulation of women's labour led to fresh agitation. The law was revised in 1891, 1911, 1922 and 1934. The Act of 1934 was passed to implement the recommendations of the Royal Commission on Labour in India. Finally, the Act of 1948 radically overhauled the then existing law.

Factory Act of 1948

Scope: Whilst the 1934 Act applied to industries where power was used and 20 or more persons were employed, the new Act applies to establishments employing 10 or more workers where power is used, and 20 or more workers where power is not used. The State Governments are authorised to extend the provisions

1 Jagjivan Ram in foreword to "Indian Labour Code" by S. C. Bose, 1948.

of the Act to any premises, irrespective of the number of persons employed, where a manufacturing process is carried on with or without the aid of power. The new Act also removes the distinction between seasonal and perennial factories.

Health, Safety and Welfare: The Act of 1948 removes diversities in standards between the States, and provides for the disposal of wastes and effluents, the elimination of dust and fumes, control of temperature, supply of cool drinking water during summer and employment of cleaners to keep the water closets clean. In factories built after the commencement of the Act, 500 c. ft. for each worker is the minimum space prescribed.

The Act lays down safety provisions, relating to striking gear, devices for cutting off power, hoists, lifts and cranes, protection of eyes, protection against dangerous fumes and explosives. No worker was to be required to carry loads likely to cause him injury.

The Act further prescribes measures such as washing facilities, first aid appliances, canteens, rest shelters, creches. The Act also provides for seating arrangements for workers and gives power to State Governments to make rules for providing suitable places for keeping the workers' clothing. Rules can also be framed requiring representatives of workers to be associated with the management in regard to welfare arrangements for the workers.

Employment of Young Persons: Under the 1934 Act the minimum age for employment of children was fixed at 12, and persons between the ages of 15 and 17 were treated as children if not certified fit for employment as adults. The 1948 Act has fixed the minimum age of employment at 14, and has raised the upper age limit of adolescents from 17 to 18.

Hours of Work: The hours of work for adult workers remain the same as under the amended 1934 Act—that is, 48 hours per week, and 9 hours per day, with a spread-over of 10½ hours in a day. For children and adolescents the hours of work have been reduced from 5 to 4½ hours per day, with a spread-over of 5 hours. Employment of women and children between 7 p.m. and 6 a.m. is prohibited. For overtime work employees are to be paid twice their normal rates of wages.

Leave with Wages: Besides weekly holidays, every worker is entitled to leave with wages, after 12 months' continuous service at the following rate: adults one day for every 20 days

of work, subject to a minimum of 10 days; children one day for every 15 days of work, subject to a minimum of 14 days. If a worker is discharged or quits service before he has taken the leave earned by him, the employer must pay wages in respect of leave not enjoyed by him.

Occupational Diseases, etc.: Factory managers must supply information about specified accidents leading to death or serious bodily injury or about occupational diseases contracted by employees. Medical practitioners attending on persons suffering from occupational diseases must report the cases to the Chief Inspector of Factories.

Administration and Enforcement: Most of the State Governments have strengthened their factory inspectorates. Though the Central Government have no responsibility for the administration of the Act, they have set up an advisory organisation known as the Office of the Chief Adviser, Factories. It serves as a clearing house for information, publishes pamphlets of an educative character and conducts training courses for Factory Inspectors.

Payment of Wages Act

The Payment of Wages Act, 1936, applies to persons employed in factories or railways drawing wages below Rs. 200 per month. The Act requires the fixation of wage periods which should not exceed one month. The Act permits certain kinds of deductions from wages such as (a) fines, (b) deductions for absence from duty, (c) deductions for damage or loss, (d) deductions for house accommodation and other amenities, (e) deductions for recovery of advances and (f) deductions for income tax, contribution to Provident Funds, etc. Fines can be imposed only for acts and omissions specified in notices approved by the competent authority.

The provisions of the Act were subsequently extended to cover all classes of persons in all mines to which the Mines Act applies. In Bombay, Government extended the Act to all persons employed in the Docks. The Act has been applied to motor bus services in Assam, Bihar, West Bengal, Madras, Coorg and Delhi; to tramways in West Bengal, Madras and Delhi.

As regards administration and enforcement the State Governments have the power to appoint authorities to administer the Act. In most of the States, the administration is entrusted to Inspectors of Factories.

Plantation Legislation

The plantation industry being the earliest organised industry in India, legislation was necessary for regulating relations between planters and workers. After the abolition of indentured labour, the difficulties of recruiting labour brought into being a class of professional recruiters called "Arkattis," who were licensed by law. The duration of the labour contract was fixed at from 3 to 5 years. Indentured labour was abolished and recruitment by contractors suppressed by the Assam Labour and Emigration Act of 1915. A Madras Act of 1927 abolished penalties for breach of contract by workers on plantations.

The Plantations Labour Act of 1951 regulates for the first time the conditions of work and employment of plantation workers. Though the Act in the first instance applies only to tea, coffee, rubber and cinchona plantations, the State Governments have been empowered to extend the provisions of the Act to other plantations. The Act fixes a 54 hour week for adults and 40 hour week for adolescents and children and prohibits the employment of children under 12, and night work for women and children between the hours of 7 p.m. and 6 a.m. It provides for leave with wages for an adult at the rate of one day for every 20 days of work, and for a young person at one day for every 15 days of work.

Mining Legislation

The first Indian Mines Act was passed in 1901. It provided that any excavation twenty feet below the surface where minerals were searched for or obtained was to be regarded as a mine. It provided for the appointment of inspectors with powers to prohibit the employment of women and children in mines where conditions were dangerous to health and safety. The Indian Mines Act, 1923, as amended by an Act of 1935 fixed the maximum hours of work above ground at 54 in the week, and 10 in the day, with one hour's rest for six hours' work, and underground work at 54 hours in the week and 9 in the day. It prohibited the employment of children under 15.

The Indian Mines Act as amended in 1937 gave powers to inspectors to issue orders to individual mines where danger was apprehended, and to levy a duty on coal and coke to defray the cost of rescue stations. The coal mines Safety Act of 1939, levies a cess for the creation of a fund to finance stowing measures and measures against fires in and inundation of mines. The Coal Mines Ordinance No. 1 of 1952 provided for the setting up of a

Coal Board for the purpose of maintenance of safety in coal mines and for the conservation of coal. The Ordinance was replaced in March, 1952 by the Coal Mines Act of 1952.

The Coal Mines Labour Welfare Fund Act of 1947, provided a cess to finance welfare measures for workers in the coal mining industry—provision of housing, water supply, educational facilities, facilities for washing, recreation and transport to and from work, and the provision of medical facilities. The Act was amended in 1949 when the Coal Mines Labour Housing Board was vested with the control of building operations financed from the Welfare Fund. Finally, the Mines Act of 1952 reduces the hours of work both surface and underground to 48 per week, and not more than 9 hours a day above ground and 8 hours a day underground. It prescribes overtime rate at one and a half times the ordinary rate of wages for surface workers and twice the ordinary rate of wages for underground workers. It raises the age limit for young persons, to be medically examined before employment in underground work, from 17 to 18 and limits the hours of work for adolescents (persons between 15 and 18 years of age) to four and a half per day and provides for more definite arrangements for drinking water, latrines, urinals, first aid, etc.

Finally, the Coal Miners' Provident Fund and Bonus Schemes Act of 1948 specifies the coal mines to which the scheme shall apply and provides for a Board of Trustees consisting of nominees of the Central Government and representatives of employers' and employees' organisations to manage the Provident Fund.

Transport Legislation: (a) Railways

Not long ago legislation relating to conditions of work in transport was limited to railways and port services. The Indian Railways Act, 1930, limited the hours of work to a maximum of 84 hours a week for persons whose work was intermittent, and 60 hours a week for others. The Act also provided for a weekly holiday to those whose work was not essentially intermittent.

The Government of India, by a new set of rules in 1951, divided all railway servants into four categories: "intensive," "continuous" "essentially intermittent," and "excluded." The limits of hours of work fixed are 45 hours per week for "intensive" staff, 54 for "continuous" workers, and 75 for "essentially intermittent" workers. The first two classes should be given a weekly rest of 30 consecutive hours, "essentially intermittent"

workers a weekly rest of 24 hours, and "excluded" workers a rest of 48 consecutive hours in a month.

(b) Dockers

The Indian Ports Act, 1908, as amended in 1922 and 1931, prohibited the employment of children under 12 in handling goods in ports to which the Act applied. Since 1937, the minimum age for employment of children in railways and docks has been raised from 12 to 15; regulations have been made to promote the continuous employment of dock workers and to eliminate the evils of casual employment. The Employment of Children Act, 1951, prohibits the employment of children under 15 in any occupation connected with the transport of passengers, goods or mails or with a port authority within the limits of any port.

One of the main labour problems in India's ports has been due to the fact that the supply of dock labour exceeded the minimum requirements and led to unemployment or under-employment among dock workers. The Dock Workers Act of 1948 empowers the Central and State Governments to frame a scheme for the registration of dock workers to secure regularity of empolyment and to regulate the employment of all workers registered and non-registered. Under this Act a "Dock Workers Regulation of Employment Scheme" has been framed for the ports of Bombay, Calcutta and Madras. Under the scheme a Dock Labour Board will be appointed consisting of representatives of Government, workers and employers. The Board's Executive Officer will maintain an employers' register and a workers' register and allocate registered workers to registered employers making the fullest possible use of the reserve pool. While all workers in the employment of the registered stevedors are eligible for registration, fresh recruitment to the reserve pool will be made by a committee on the basis of age, physical fitness and experience. The scheme also provides for the appointment of an Appeal Tribunal to hear and dispose of appeals from the orders of the Board, or the special officer. In April, 1951, the Bombay Dock Labour Board was constituted with 12 members and the Chairman of the Bombay Port Trust has been nominated its Chairman.

Shops and Offices

Until 1937 there were no measures regulating conditions of work in shops, commercial establishments, restaurants and

theatres. Among the State Governments Bombay led the way in 1939 with its Shops and Establishments Act. In 1940 Bengal and Punjab enacted similar Acts. In 1947, the Central Provinces, the United Provinces and Madras followed with like legislation. The Bombay Shops Act of 1939 was replaced by a new Act in 1949. The main features of these Acts may be briefly indicated: (1) They do not extend to the whole of their respective States, but only to a few cities, towns or areas; but the State Government can extend the application of the Act by notification. (2) All the Acts cover wage earners employed in shops, commercial establishments, including insurance and banking firms, restaurants, theatres, cinemas and other places of public entertainment. (3) All the Acts have provisions regulating opening and closing hours, hours of work, rest intervals, overtime rates and weekly holidays. The U.P. and Punjab Acts make a distinction between summer and winter, and prescribe a later opening and an earlier closing during the winter months. The average hours of work per day are 9 as between the different States, and per week 51. Workers are entitled to a weekly holiday. Most of the Acts lay down a higher rate of pay for overtime work. (4) Annual holidays with pay are provided, ranging from 12 to 15 days, 10 days casual leave, and 12 to 15 days sick leave. (5) Most of the Acts include provisions for the protection of children and young persons. The minimum age of admission ranges from 10 to 14 years, and the maximum daily hours of work for young persons (persons under 17) are fixed at 6 per day in Bombay and at 7 in many of the other States.

The Government of India have under consideration a comprehensive Central Act which will apply to all the States and enforce uniform conditions.

Debt Legislation

The Labour Commission made a few recommendations regarding imprisonment for debt. Under the Civil Procedure Code, any male debtor could be arrested and imprisoned for six months in execution of a decree for the payment of Rs. 60 or more, and for six weeks in the case of a smaller sum. The Commission recommended that in the case of an industrial worker receiving less than Rs. 100 per month, arrest and imprisonment for debt should be abolished. As a result, in 1934, a Relief of Indebtedness Act was passed in the Punjab abolishing imprisonment for debt, except when the debtor refuses to pay a sum within his capacity from such property as is liable to attachment. Later in 1936, the

Civil Procedure Code was amended preventing the imprisonment of debtors.

An Act of 1937 exempts from attachment all salaries of workers not exceeding Rs. 100 per month, and lays down that the pay of servants of Government and railway companies receiving more than Rs. 100 per month would be exempt to the extent of the first Rs. 100 and one-half of the remainder.

The Royal Commission on Labour found that there were "money-lenders who prey upon workers and depend upon the threat of violence. The *lathi* is the only court to which they appeal and they may be seen waiting outside the factory gate on pay day, ready to pounce on their debtors as they emerge."[1] They recommended that besetting an industrial establishment for the recovery of debts should be made a criminal offence, and defined besetting as "loitering within the precincts or near or within the sight of any gate or outlet of the establishment." This recommendation was subsequently adopted in Bengal Workmen's Protection Act, 1935, and in the C.P. by the Protection of Debtors Act, 1937.

The Labour Commission also made certain recommendations regarding liquidation of debts of the workers. The Government of India prepared a scheme to be applied to Delhi in the first instance but it was dropped. The C.P. Adjustment and Liquidation of Industrial Workmen's Debt Act, 1936, based on the Delhi Scheme provides for liquidation of debts of industrial workers earning not more than Rs. 50 a month and whose debts exceed their assets plus three months' wages. The Bihar Workmen's Protection Act, 1948, seeks to prevent the recovery of debts from certain classes of workmen by besetting them in the places where they work or receive wages, and to protect such workmen from molestation and intimidation by their creditors. The Rege Committee are far from enthusiastic about debt legislation when they remark that such legislation has not produced any tangible results.

We do not think it necessary to refer to other legislative measures like the Workmen's Compensation Act, the Trade Disputes Act, the Maternity Benefit Acts and the Minimum Wages Act which we have described and commented upon in other sections.

Labour Welfare

Even before the advent of our national government concerns like the Railways, the Tata Iron and Steel Co., the Buckingham

1 Report, pp. 235-6.

Mills in Madras and the Empress Mills in Nagpur adopted welfare measures in connection with their employees, under experienced welfare officers. With the advent of Congress Ministries in the Provinces, the Bombay Government set apart 1,20,000 for industrial welfare in 1938-39. The example was followed by U.P., Bengal, the C.P. and Bihar. The welfare work in Bombay included indoor and outdoor recreation, provision of libraries, reading rooms, canteens, lantern lectures, nursery schools, advice on maternity and health and radio programmes. Under the Factories Act. 1948, the Mines Act 1952, and the Plantation Labour Act, 1951, provision has been made for canteens, creches, rest shelters, washing facilities, medical aid and for the appointment of labour officers. Hospitals and maternity centres have been opened in coal fields, as also multi-purpose welfare centres providing educational, recreational and other welfare activities for the workers and their children. Scholarships for technical and higher education have been instituted for the benefit of miners' children. Industrial housing has been undertaken by many States with the help of grants from the Centre, and Housing Boards have been established.

Though much has been done in the last few years in the form of legislation for ameliorating the condition of the working classes, the vital problem is that of their application and enforcement, in a country like ours where the majority of the workers are illiterate and ignorant of their rights, and the Trade Unions are weak and incapable of enforcing the workers' rights. There is need of an efficient, alert and honest labour inspectorate. This question was considered by the Asian Regional Conference of the I.L.O. in January 1950. It is gratifying to note that India was the first country in Asia to ratify the conventions in 1950. Model rules have been elaborated in consultation with State Governments, for the guidance of labour inspectors and certifying surgeons in the States.

CHAPTER XXIII

INDUSTRIAL RELATIONS

Employers' Organisations

It is worthwhile noting that, whereas organisations on the part of factory workers are of very recent growth, large-scale employers have long been organised in India for various purposes, and have constantly been consulted by the Government of India

and Local Governments in regard to labour policy. On the other hand, taking into account the fact that workers are uneducated, lacking in experience and leadership, and living on subsistence wages, it is a matter of satisfaction that they should have succeeded in organising even a few sound trade unions in certain industries. Trade Unionism in India may correctly be said to be in a very early stage of development.

(a) The first organisations of employers in India were associations of Europeans. It is only recently that Indian employers have developed organisations of their own. The employers' organisations are either (1) commercial associations, (2) industrial associations, or (3) employers' associations in the strict sense of the word. The most important commercial associations are the Chambers of Commerce, both European and Indian, including merchants, bankers and businessmen. The first European Chamber of Commerce was founded at Calcutta in 1834, and at Bombay and Madras in 1836. The first Indian Chamber of Commerce was founded at Calcutta in 1887 under the name of the Bengal National Chamber of Commerce. The Indian Merchants' Chamber was established in Bombay in 1907. Other commercial associations include the Marwari Chamber of Commerce, Calcutta (1900), and the South Indian Chamber of Commerce, Madras (1909). These organisations are not employers of industrial labour, but they exercise considerable influence on the development of the labour policy, both of the employers and of the Government. The communal spirit reflected itself even in the field of commercial organisations by the institution of a separate Muslim Chamber of Commerce, indicative of the new phase of capitalist development in India, Muslim bourgeoisie competing with Hindu bourgeoisie. Moreover, a number of ostensibly regional, but in fact, communal commercial organisations have been formed in recent years, like the Maharashtra Chamber of Commerce and the Gujarat Chamber of Commerce, which reveal the intensification of competition between the bourgeoisie of different regions wishing to exploit the growing spirit of linguistic regionalism.

(b) The Industrial Associations include the Bombay Millowners' Association (1875), the Indian Tea Association (1881), the Indian Jute Mills' Association (1884), the Ahmedabad Millowners' Association (1891) and the United Planters' Association of Southern India (1893). Moreover, as in the case of the European Chambers of Commerce, Indian commercial and industrial associations realised the need of a central organisation, with a view to co-

ordinating their commercial and industrial interests, and for this purpose the Federation of Indian Chambers of Commerce and Industry was founded in 1927. In order to take part in international discussions, they also joined the International Chamber of Commerce, and formed an Indian National Committee.

(c) The third class of employers' organisations are associations formed with the express object of dealing with labour questions. The most important of these organisations are the Employers' Federation of Southern India (1920), the All-India Organisation of Industrial Employers founded in 1933 by the Federation of the Indian Chambers of Commerce and Industry, and the Employers' Federation of India founded by the Bombay Millowners' Association in March, 1933. These organisations were founded in order that the employers may have a common labour policy for the country as a whole, and may be in a better position to take part in the deliberations of the International Labour Conference. The chief aims and objects of the Employers' Federation of Southern India are to encourage the payment of fair rates of wages, to protect the mutual interests of employers and employed, and to safeguard employers against unfair action by workers. The All-India Organisation of Industrial Employers and the Employers' Federation of India have for their objects the establishment of harmonious relationship between labour and capital, the securing of proper representation in the Legislatures and the nomination of delegates and advisers to represent the employers at the International Labour Conference.

Most of thse Associations were represented on Legislatures and Municipalities. Employer members found a place on all Commissions and Committees like the Industrial Commission and the Royal Commissions on Labour. They exercised considerable influence in this way in the formulation of any policy relating to labour by Government. Employers' Associations, moreover, played an increasingly active part in determining the conditions of labour, as most of the industries were now highly organised. Thus, in the cotton industry the Bombay Millowners' Association after a strike in 1920 reduced the hours of work to 10 in the day, before the Act of 1922 reduced them to 60 per week. The granting of bonuses or cost of living allowances to their workers was also determined by the Millowners' Associations of Bombay and Ahmedabad.

Labour Organisations

The first case of collective action by Indian workers was in

1884 when a conference of workers drew up a memorial to the Factory Commission. It was not, however, till 1897 that an organisation of labour, namely, the Amalgamated Society of Railway Servants was registered under the Indian Companies Act. Later in 1907 the Postal Union, and in 1910 the Kamgar Hitwardhak Sabha were formed in Bombay. In 1918, the textile workers at Madras formed an industrial organisation. Since then, the number of such organisations has been rapidly increasing in almost all industries throughout the country. The rise in the cost of living during the first world war and in the boom period following it, the consciousness of their importance brought about as a result of war among the labourers, and the necessity of strikes during 1918-22 to raise wages, led to the formation of a number of trade unions. In the development of trade unionism in India, the existence of the International Labour Organisation has played an important part. The need for a Central Organisation to nominate delegates to the International Labour Conference stimulated not only the founding of such central organisations, but also the formation of individual unions. The first national trade union organisation with affiliated unions in all parts of the country was the All-India Trade Union Congress established in 1920.

That labour in India has been late in recognising the need for combination was noted as early as 1905 in a letter by the Collector of Bombay to the Bombay Government. "If the millowners desire to increase the hours, the operatives have no real power to prevent them. Their power of combination is as yet exceedingly limited; a large proportion will always continue to prefer to get as high wages as they can, regardless of their own welfare in the long run."[1] Indian labour in the early days was unable to combine with the object of securing a common end by concerted action. One essential condition for the growth of trade unionism is the existence of a class of wage earners divorced from the ownership of the means of production. In India, the factory worker is an agricultural labourer who retains his interest in land. It was not till a class of workers, detached from the land and looking to some definite form of industrial employment for the means of subsistence, arose that trade unionism acquired a hold over the labouring population. The years that followed the close of the first world war was a period of high prices and stimulated the formation of Trade Unions. In 1925, the total number of Unions was reported to be 175. In 1929, 51 Unions claiming over 190,000 mem-

1 Quoted by P. P. Pillai, op. cit. p. 258.

bers were affiliated to the All-India Trade Union Congress, which was formed in 1920 to enable organised labour to send its delegates to the International Labour Conference. In 1937, 63 Unions with a membership of over 151,000 workers were affiliated to the National Trade Union Federation, which was formed as the consequence of a split at the Nagpur meeting of the Trade Union Congress in 1929. The split arose on the question of boycotting the Royal Commission on Labour. In addition, a number of Unions were still affiliated to the All-India Trade Union Congress. There were other Unions which were not connected with either of these national federations.

In 1929, the All-India Trade Union Congress was captured by radicals with communist leanings. The moderate section led by Mr. N. M. Joshi seceded from the Congress, forming a new organisation known as Indian Trade Union Federation. In 1931, there was a further split when the left wing formed the All-India Red Trade Union Congress. A Trade Union Unity Conference called at Bombay in 1931 established the National Federation in 1933. This was amalgamated with the Indian Trade Union Federation in 1933. In 1934 the rise of the Congress Socialist Party gave a further impetus to the Trade Union movement. In 1938, at a joint session of All-India Trade Union Congress and National Trade Union Federation, it was decided to combine the two bodies into one central organisation with fifty-fifty representation on the General Council. In spite of such apparent union, Mr. M. N. Roy and Mr. Jamnadas Mehta formed another organisation known as the Trade Union Federation at Delhi in 1941, for whole-hearted support of Indian labour for war purposes. However, there was a split between Mr. Roy and Mr. Mehta on the question of the Government subsidy of Rs. 13,000 per month, granted through Mr. Roy to the Indian Federation of Labour for the purpose of carrying on war propaganda among the workers. A resolution to this effect was dropped by the All-India Trade Union Congress at Delhi in 1942 for want of quorum. In 1937, however, the labour sub-committee of the Gandhi Seva Sangh, projected an organisation of labour on Gandhiji's principles of truth and non-violence on lines similar to those of the Ahmedabad Textile Labour Association. This came to be known as the Hindustan Mazdur Sangh. The movement was accelerated by the Congress with a view to getting control over industrial labour which during the war had not supported Congress policy. On 3rd May 1947, Mr. Gulzarilal Nanda, the Secretary of the Sangh, convened a con-

ference of all Congress unions and of all leading Congressmen and Trade Union workers. As a result, a central organisation of Trade Unions based on Gandhian ideology of class collaboration called All-India National Trade Union Congress was started. One main feature of this organisation is that every affiliated union has to agree to submit to arbitration every individual dispute in which settlement is not reached by negotiation, and must not sanction or support a strike till other means of settlement are exhausted.

This has split up the Trade Union Movement. As if this split was not enough, the Socialist Party, after its secession from Congress, started its own Trade Union Organisation, called Hindustan Mazdur Panchayat. The Royist Party withdrew from active political activity and the All-India Federation of Labour ceased to exist. In December, 1948, a new all-India organisation called the Hind Mazdur Sabha was formed in which the Hindustan Mazdur Panchayat and the Indian Federation of Labour were merged. Some seceders from All-India Trade Union conference have sponsored a fourth all-India labour organisation—the United Trade Union Congress—since April, 1949, led by Mrinal Kanti Bose, a former general secretary of AITUC. These four all-India organisations claimed the following strength in 1951:[1]

	Number of affiliated unions	Members
Indian National Trade Union Congress	1,232	1,548,568
All-Indian Trade Union Congress	736	758,314
Hind Mazdur Sabha	517	804,337
United Trade Union Congress	332	384,962

It is a tragedy that leftist forces are opposing one another and weakening the Trade Union Movement. The Indian National Trade Union Congress has been accepted by Government as the most representative organisation of Indian workers.

The table below shows the growth in the number of registered unions after the passing of the Trade Unions Act, 1926:—

Year	Registered Unions	Number of Unions submitting returns	Total membership of Unions in Col. 3	Average membership per Union in Col 3
(1)	(2)	(3)	(4)	(5)
1927-28	29	28	100,619	3,594
1932-33	170	147	237,369	1,615
1937-38	420	343	390,112	1,137
1938-39	562	394	399,159	1,013
1941-42	747	455	573,520	1,260

1 India Labour Year Book, 1950-51, p. 173.

1943-44	761	563	780,967	1,387	
1944-45	865	573	889,388	1,552	
1945-46[1]	1,087	585	864,031[2]	1,480	
1946-47[3]	1,729	922	1,106,832	1,200	
1947-48	2,599	1,512	1,322,273	875	
1948-49	2,969	1,696	1,454,416	858	
1949-50	3,385	1,804	1,628,806	903	
1950-51	3,454	1,896	1,577,227	832	
1949-50	3,793	2,126	1,976,759		All India, Parts A, B and C States.
1950-51	4,277	2,346	2,022,434		

The total income of the registered trade unions increased from Rs. 1.6 lakhs in 1927-28 to Rs. 6.9 lakhs in 1937-38, to Rs. 17.7 lakhs in 1941-42, to 42.4 lakhs in 1946-47 and 58.8 lakhs in 1948-49. The average income per union was 4118 for 1943-44, but declined to 3385 for 1944-45 and 3184 for 1948-49. Thus, in spite of the rapid development of trade unionism during the last few years, the resources of these unions are exceedingly limited and the membership comparatively small.

There are several types of trade unions in India. At the bottom of the scale the Labour Commission placed the unions "which represent little or nothing more than the one or two men who fill the leading offices....The object is to give a platform and a name to the leaders." This type was at one time characteristic of Bengal more than of any other province, but is disappearing even there. The next type mentioned by the Commission consists of unions brought into existence for a definite and an immediate object. They have their origin in the genuine need of the workers. The usual form is a "strike committee" which disappears at the end of the strike.

Apart from these temporary unions there are crafts unions like the Weavers' Trade Unions which are combinations of workers employed in different kinds of occupation in the same or allied industries. Industrial Unions are combinations of workers in the same industry, like the National Seamen's Union of India registered in 1932 and the G.I.P. Railway Workers' Union also registered in the same year. To the same class belongs the Girni Kamgar (Red Flag) Union of Bombay organised in 1928, with 50,000 cotton mill workers. The other important national federations are the All-India Postal and Railway Mail Service Union. In addition, there are provincial and local federations; most outstanding of such local organisations being the Textile Labour Association at

1 Does not include figures for the Punjab.

2 Relates to 584 Unions.

3 Figures for 1946-47 onwards relate to Part A States in Indian Union. Earlier figures are for undivided India; figures from 1927-28 to 1945-46 are from Indian Labour Year Book 1949-50, p. 151; the rest from *Indian Labour Gazette*, July 1953.

Ahmedabad founded by Gandhiji in 1920. Recently there has been a tendency to start industrial unions on the national level like the National Federation of Railway Workers and the All-India Federation of Textile Workers.

Weaknessess and Need of Trade Unions

A comparison of the figures of trade union membership with those of the workers employed in organised and unorganised industries is enough to show that the unions have not succeeded in organising any considerable majority of the workers. When we inquire into the reasons of the weakness of trade unions in India, there are certain obvious factors which have to be taken into account and which were examined by the Royal Commission on Labour.

(1) One serious obstacle to the development of the trade union movement is the migratory character of Indian labour. "Those who are frequently leaving an industrial centre, even for short spells, and are frequently changing their employer, are less inclined than more permanent workers to maintain a constant interest in any organisation."[1] (2) The conditions under which industrial labour has to work with comparatively long hours, lack of leisure and a scale of pay which may well be characterised as subsistence pay, make it difficult for the workers either to pay the small subscription which membership would involve, or to take a genuine interest in any activity outside their work. (3) As the Labour Commission observe, differences of language and race are separating factors which make it difficult for the workers to combine. (4) There is the active opposition of the jobbers whose interests conflict with those of the workers. (5) The lack of education on the part of the workers is a most serious obstacle in the way of organisation. On account of the inability of the worker to take a long view of his interests, apart from his inability to contribute liberally to trade union funds, trade unions in India have been able to achieve very little in the shape of improving the condition of the workers and their standard of comfort.

The Labour Commission expressed its conviction that "nothing but a strong trade union movement will give the Indian workmen adequate protection . . . . There are strict limitations to the power of Government and the public to protect workmen who are unable to protect themselves. Labour laws, indeed, find one of their most effective sanctions in the support of organised unions." "It is in the power to combine that labour has the only

1 Report, p. 321.

lasting effective safeguard against exploitation and the only lasting security against inhuman conditions."[1] The Indian Trade Union Act, 1926, was the first attempt to recognise trade unions under the law. The Act was confined to those unions which voluntarily sought registration under it. Unions registered under the Act were required to furnish audited accounts, and to include a majority of actual workers in the executive. After the passage of the Trade Union Act, 1926, the Government of India and several Provincial Governments advised the unions of their employees not to apply for registration. This was due to the difficulty of reconciling the privileges which their employees received as members of registered unions with their obligations under the Government Servants' Conduct Rules. The Royal Commission pointed out that those rules were framed primarily to regulate the conduct of officials outside the ranks of labour, and that, so far as industrial workers were concerned, Government should encourage them to secure registration. Government subsequently changed its policy and unions of industrial workers employed by Government have been allowed to register.

Private employers recognised unions subject to rules made by themselves. They refused to recognise unions, because they included only a minority of the class of workers concerned, or because another union was already in existence. Refusal of recognition was also due to the fact that a union did not dispense with the services of a particular official, or because outsiders were included in its executive, or because a union had failed to register under the Trade Unions Act. The Commission observed in this connection that neither the minority character of a union, nor the prior existence of another union, was a good reason for refusing recognition. "The endeavour to dictate to unions on the subject of their officers or leaders is equally short-sighted and unwise."[2] There can be no doubt that, under the conditions of factory labour in India, one of the obstacles to the development of trade unionism has been the difficulty of finding leaders within the ranks of labour. If trade unionism is to grow in India, for some time to come the leaders have to be found amongst outsiders. In some cases victimisation and more frequently the fear of it, gives an additional value to the outsider. As the Labour Commission observed, "The claim to be allowed to deal only with 'one's own men's is frequently little more than an endeavour to secure that

1 *Ibid.*, p. 322.
2 *Ibid.*, p. 324.

the case of the men shall be presented by persons who are not likely to prove assertive. In every country much of the active work of trade unions, particularly in their relations with employers, is carried on by persons whose livelihood does not depend on the employers' will."[1] The Commission did not hesitate to characterise the attitude of the employers towards outsiders as unreasonable. It even asserted that, if such an outsider was a dismissed employee, the attempt to suppress such individuals by repressing their organisations or by insisting on their exclusion had seldom been successful.

It would appear that recognition by employers in India was generally limited to individual employers. There was very little of collective bargaining in the sense of negotiations between organisations of employers and organisations of workers. The only trade union which succeeded in establishing collective bargaining was the Labour Union at Ahmedabad, where since 1920 there has existed a permanent arbitration board consisting of a representative of the Union and a representative of the Millowners' Association. Grievances are, in the first place, discussed between the Union and the Association; if agreement is not reached, disputes are referred to the arbitration board for final decision.[2]

Major changes have been introduced in the Trade Union Act, 1926, by the amending Act of 1947 which provided for compulsory recognition of representative unions by the employers, and listed certain practices as unfair practices on the part of employers and recognised unions. A procedure was laid down for recognition of trade unions. These provisions have not been put into force as yet. To check the growth of unhealthy unions and to promote their development on healthy lines Government propose to revise and consolidate the existing Act.

Indian labour was represented by trade union leaders both in Central Legislative Assembly and in the Provincial Legislative Councils such as Bombay and Bengal. Trade union leaders were members of the Royal Commission on Labour, the Round Table Conference and the Indian Franchise Committee. Most of these representatives were nominees of the Government, but the selection of the trade union leaders tended to increase the status and stability of the trade unions. Representatives of unions have attended meetings, such as the British Trade Union Congress, the Annual Congress of the International Labour Organisation,

1 *Ibid.*, p. 325.

2 Royal Commission on Indian Labour: Memorandum of the Government of Bombay, pp. 235-236.

and successive sessions of the International Labour Conference.

In spite of the progress made in recent years, the Indian trade union movement suffers from internal weakness and external opposition and misunderstanding. It is still dependent on outside leadership. Most of the leaders are professional men, lawyers and social workers and are, therefore, lacking in the technical knowledge and that sympathetic insight into the problems of the workers, which a leader belonging to the rank and file of labour is expected to possess. The leaders are often connected with a number of trade unions—their attention is divided—and the philanthropic nature of their work is apt to weaken their sense of responsibility. The trade union movement in India may well be summed up as neither self-reliant nor financially self-sustaining.

Taking a wider view of the movement, it might be observed that the trade union movement is a characteristic development of 19th century capitalism. With the outbreak of the world war I, the trade unions assumed a quasi-public character, with the Government as an important, but posing as a disinterested, party. In the countries, where labour was in power or represented a substantial majority in the post-war period, the system of Government control of wages and industrial councils directed by the State was continued. Even in Great Britain and the U.S.A. governmental intervention was accepted by trade unions in view of growing distress and unemployment. The outbreak of the second world war profoundly altered the character of trade unionism as a voluntary agency for the improvement of the status of workers. Even if, with economic recovery, existing forms of capitalism find a new lease of life, the adoption of national economic planning will render superfluous the work of such agencies as the trade unions of earlier days, which served to protect the interests of the workers in a society governed by *laissez faire* principles. Trade unions, in advanced countries today, have no longer to fight for improvement in the conditions of employment, but largely for maintenance of their living standards and a share in the management of industry.

We in India find ourselves faced with the same problem. Shall we pass through the evolutionary stages of a capitalist society necessitating the further development of trade unionism, or shall we, profiting by the lessons of the past in the West, order our economic life on a basis of socialised industries, which will remove the need for trade union organisation for the *express*

purpose of strikes by removing the conflict between labour and capital? Shall we not convert the unions into organisations for the promotion of the social and cultural life of the workers?

Industrial Disputes

The need for improved organisation of industrial relations in India is brought into evidence by the frequency of strikes. Isolated disputes took place as early as the eighties of the last century, but it was not till 1918 that strikes became serious. There were two general strikes in Bombay in 1918-19 and 1920 involving about 150,000 workers; two in Ahmedabad in 1920 and 1921 involving 30,000 and 33,000 persons. During 1920 and 1921, there were strikes among cotton mill workers at Sholapur, postal workers, tramway workers and railway shop workers, lasting from a fortnight to five months. "The main cause was the realisation of the potentialities of the strike in the existing situation, and this was assisted by the emergence of trade union organisers, by the education which the war had given to the masses and by a scarcity of labour arising from the expansion of industry, and aggravated by the great epidemics of influenza."[1]

Accurate data on industrial disputes were not available till 1921, when a Labour Office was established by the Government of Bombay. The following table shows the number of disputes in India from 1920:—

Year	Number of disputes	Workers involved (in thousands)	Working days lost (in millions)
1921	396	600	7.0
1926	128	187	1.1
1931	166	203	2.4
1937	379	648	9.0
1939	406	409	5.0
1943	716	525	2.3
1945	820	748	4.1
1946	1,629	1,962	12.7
1947	1,811	1,840	16.6
1948	1,259	1,059	7.8
1949	920	686	6.6
1950	814	720	12.9
1951	1,071	691	3.9
1952	963	809	3.3

Of the strikes which have occurred since 1918, one of the most serious was in the cotton industry in Bombay City in 1924; it involved over 160,000 workers and caused a loss of 7.75 million working days. The immediate cause of the trouble was the decision of the Millowners' Association to withhold the annual bonus, which had been granted for 5 years, and had become part of the

1 Labour Commission Report, p. 333.

wages. A further strike caused by the decision of the Bombay Millowners' Association to reduce the dearness allowance by 20 per cent broke out in September, 1925. The Millowners finally decided to restore the cut, but not before the strike had caused a loss of about 11 million working days. During 1928, the total loss due to strike amounted to 31½ million days. There were 203 disputes out of which 111 were in Bombay and 60 in Bengal; 110 were in the cotton and woolen textile industry. The recrudescence of industrial unrest during 1937-39 may be partly explained by the advent in 1937 of Popular Governments in the Provinces. Out of 379 strikes in 1937, no less than 221 were in the cotton textile and jute industries.

The considerable increase in the number of industrial disputes during the second world war and after was due to a variety of reasons, the chief being the continuous rise in cost of living as a result of inflation. In 1947 the number of disputes rose to 1,811, causing a loss of 16.6 million working days. The gradual fall in subsequent years has been due to the Industrial Truce agreed to at a Tripartite Conference of Government, employers and employees convened by the Government of India at the instance of Pandit Nehru in December, 1947. The fall in the number of disputes was also due to improvement in working conditions, and a substantial increase in the wages and allowances of workers brought about by State interference in industrial disputes and enforcement of the awards of Adjudicators and Tribunals. In 1950, however, there was a general strike in the cotton textile industry in Bombay which involved over 200,000 workers, lasted for about two months, and caused a loss of 12.8 million working days. Since then there has been a marked improvement in the labour situation.

Dealing with the causes of industrial disputes, the Royal Commission on Labour quoted statistics to show that "in 976 disputes the principal demand related to the question of pay or bonus, and in 425, to the question of personnel, that is, to the reinstatement or dismissal of one or more individuals. 74 strikes were primarily concerned with leave or hours of work. and the remaining 382 could not be classified in respect of the demand made." There can be no doubt that the strikes that broke out after the close of the first world war had economic reasons behind them. In 1918, although the profits of some textile undertakings rose 200 per cent, the real wages of the workers had declined owing to rise in prices. Moreover, the workers had suddenly awakened to the

disabilities from which they suffered in respect of long hours and bad conditions of work. It may be also admitted that political influences had their share during the post-war period. After 1922, the hours of work had been reduced and wages had gone up, unaccompanied by a fall in prices. The period between 1923 and 1927 was a period of comparative peace. With the advent of depression and the disappearance of profits, as well as the endeavours made by employers to meet the situation by improvement in the methods of production and reduction in wages, there was again a marked increase in the number of strikes.

Wages continued to be the most frequent single cause for disputes during and after the second world war; the issues of bonus and personnel have become important during recent years. The disputes regarding personnel include disputes relating to retrenchment, discharge or dismissal, conduct of individuals, etc.

The Labour Commission was emphatic on one matter, that "causes unconnected with industry play a much smaller part in strikes than is frequently supposed . . . . Although workers may have been influenced by persons with nationalist, communist or commercial ends to serve, there has rarely been a strike of any importance which has not been due entirely or largely to economic reasons."[1] This is true even to day, two decades after this was written. The employers in India are instinctively inclined to lay the blame of strikes on agitators. Every organiser of a trade union in India is put down as an agitator and a fomenter of mischief. Mr. B. Shiva Rao, a labour representative to the International Labour Conference, describes the attitude of the employer in a graphic way: "I have no objection to a properly constituted union, an employer will tell you. His definition of such a union is that there should be no outsiders in the executive. The law no doubt allows it, but an empolyer is not bound to have dealings with such a union even if it be registered under the law. A union with outsiders is tainted and deserves no notice. But let one be formed with only workers in it; sooner or later, the members of the executive find themselves one by one out of work; never, of course, will it be admitted, because they are active in promoting the union—but it happens everytime."[2]

Added to this hostility on the part of the employers is the support which the employers receive from Government. "The full strength of the Government, from the highest official to the

1 Report, p. 335.
2 "India Analysed," Vol. II, 1934, p. 43.

village policeman, is behind the employer." What the employers have failed to realise is that, even in the absence of trade unions, workers can always form themselves into strike committees, and clever selfish demagogues may foment trouble, whereas stable trade unions might secure advantage both to the workmen and their employers. As the Cawnpore Labour Enquiry Committee observed: "A strong union is an invaluable asset in several ways and is an insurance against unauthorised, irregular and lightning strikes."

Prevention and Settlement of Disputes

Reviewing the methods for prevention or settlement of disputes, the Royal Commission on Labour considered the part that might be played by works committees. Such committees had been working for some years in the Buckingham and Carnatic Mills. They pronounced the results "disappointing." "In the minds of many employers there is the belief that works committees will provide a substitute for trade unions, while these are regarded by trade union leaders as rival institutions, deserving of no encouragement."[1] The only instance where a works committee met with success is at Ahmedabad, where the influence of Gandhiji, trusted by workers and employers alike, had been instrumental in the settlement of disputes.

In 1921, representative committees were set up in Bengal and Bombay to consider the possibility of alleviating industrial unrest. The Bengal Committee rejected as inapplicable to Bengal all schemes involving an element of compulsion by law, and advocated the settlement of disputes by agreement through joint works committees. The Bombay Committee recommended the standardisation of wages, the undertaking of housing and welfare work, the establishment of works committees and the recognition of trade unions. For the settlement of disputes, the Committee recommended that legislation should be passed providing for the establishment of courts of enquiry composed of representatives of employers and employees.

The Trade Disputes Act of 1929 empowered Local Governments, or the Central Government where the employer was a department of the Central Government or a railway company, to refer "any matters appearing to be connected with or relevant to" an existing or apprehended dispute to a court of enquiry, or to refer the dispute to a board of conciliation; the same action must be taken on the application of both the parties to a dispute. A

1 Report, p. 342.

court of enquiry was to consist of one or more independent persons appointed by the Local Government or the Governor-General; a Board of Conciliation may consist of an independent person as Chairman and two or four members who may be independent persons or representatives of the parties, or of one independent person. The duties of the Court of Enquiry were confined to investigation and report on matters referred to them. Boards of Conciliation, on the other hand, were charged with the duty of attempting to effect "a fair and amicable settlement," and if no settlement was reached, then of reporting to the appointing authority.

The question (a) whether it should be made obligatory on the public authorities to refer disputes to arbitration and (b) whether force of law be given to the findings of the tribunals were examined by the Labour Commission, who found both these proposals open to serious objections The Commission, however, expressed the hope that the authorities would make greater use of their powers to appoint courts of enquiry or boards of conciliation. Though there were more than 500 disputes during the period 1929-1933, only two courts of enquiry and two boards of conciliation were appointed by Government. Between 1928 and 1936, although 11 disputes were settled by conciliation or arbitration, only in three of them was action taken by the Provincial Governments under the Trade Disputes Act. When the Congress Governments first came into power in the Provinces in 1937, within a year of their assumption of office, 15 disputes were referred to committees of enquiry and boards of conciliation with remarkable results.

The Trade Disputes Act of 1929, modelled on the British Trade Disputes Act of 1927, rendered general strikes and lock-outs illegal on the ground that such strikes might compel the Government to take or abstain from taking any particular course of action. It required a fourteen days' notice of strike in public utility concerns. The Royal Commission on Labour pointed out that the Act had "tried to copy the less valuable part of the machinery employed in Great Britain, while ignoring the most valuable part."[1] There less reliance has been placed on *ad hoc* public enquiries of the kind contemplated in the Indian Trade Disputes Act than on the efforts at settlement before strikes and lock-outs could be declared.

In 1934, the Bombay Trade Disputes Conciliation Act was passed to provide for the settlement of disputes by conciliation and

1 Report, p. 348.

for certain other purposes. In the first instance, the Act was applicable to the textile industry in the City and suburbs of Bombay but the Local Government was given the power to extend it to other parts of the province.

In 1938, the Bombay Industrial Disputes Act was passed under the regime of the Congress Ministry which replaced the Act of 1934. The Act divided trade unions into "representative," "registered" and "qualified." A trade union was registered if it had a membership of 5 per cent of the total number of workers and was recognised by the employers, or if it had 25 per cent membership independently of the employers' recognition. A union with only 5 per cent membership not recognised by the employers became a "qualified" union. A registered union which had a membership of 25 per cent of the total number of workers for a continuous period of six months became a "representative" union. In the absence of a registered union, the workers could select five workers from their own ranks to represent their case. Three distinct steps were provided before a strike or lock-out could be declared. Notice had first to be given. Negotiations would follow, and if an agreement was reached, it would be registered. If no settlement was reached, the contending party had to submit a full statement of its case. The dispute was recorded and the chief conciliator submitted a report to Government. Finally, in case of failure Government could refer the matter to a Board of Conciliation. During the conciliation proceedings, strikes and lock-outs were illegal. So far, conciliation was not obligatory but now it was made compulsory. Strikes and lock-outs before the completion of conciliation proceedings were declared illegal, but the acceptance of award was not obligatory. This Act is said to mark the beginning of a labour judiciary with its provision for the creation of a permanent machinery in the shape of an Industrial Court.

The Bombay Industrial Disputes Act, 1938, had made conciliation compulsory. In 1941, by an amendment of the Act, arbitration was made compulsory in certain cases. The Bombay Industrial Relations Act, 1946, wholly replaces the Act of 1938, and introduces the principle of compulsory arbitration. Apart from compulsory conciliation, the Act empowers Government to refer any dispute between employers and employees to the arbitration of any industrial court in case of danger to the public peace, serious or prolonged hardships to a large section of the community or serious effects on the industry concerned. "In

public interest" is so construed as to rule out the possibility of any strike. The right to strike is completely taken away. Strike is forbidden during the pending of arbitration proceedings and the award of Government.

The Act prescribes two months in the aggregate as the period of completing all stages of conciliation proceedings. Judicial bodies like Labour Courts may be established to deal with small disputes. An Industrial Court, consisting of three or more persons of the status of High Court Judges, is to be appointed to arbitrate on cases referred to it by Government, and to act as a final Court of appeal. The award of the Court is final, and cannot be challenged. Internal machinery in the shape of joint committees for the settlement of disputes is provided. A new classification of Trade Unions is introduced under the Act. A new class of "Approved Unions" is added. A union can apply for registration as "approved union" on fulfilment of certain conditions and on an undertaking to make full use of the machinery provided by the Act. It is granted certain privileges denied to other unions. This is an attempt to foster the growth of Trade Unions on the Ahmedabad model based on class collaboration ideology. It is significant that no minimum membership is prescribed for an "approved union"; any small group of workers can apply for recognition as an "approved union", if it agrees to abide by the conditions laid down in the Act. The Act was amended twice in 1948 to make provision for the setting up of wage boards, compulsory formation of Joint Committees, etc. Certain new provisions have been added by an amendment Act in 1949 to foster collective bargaining.

There is no doubt that the Bombay Trade Disputes Act deprives labour of an effective instrument without any compensatory advantage. The regulations regarding the registration of unions, though modified in the final bill, were likely to encourage unions favoured by employers.[1] Looking to the fact that in almost every country the Government is always on the side of the employers in cases of industrial disputes, the deprivation of the strike weapon, even for an interim period of four months during which the conciliation machinery is to operate, can only be regarded as a serious obstacle in the way of workers in

1 It is interesting to note in this connection what the Bombay Textile Enquiry Report says: "Though the fear of company unions being established may not be justified, it must be admitted that the condition of a 25 per cent membership for a representative union is very difficult to fulfil, and its imposition may operate as a hindrance in the way of encouraging the growth of trade unions." (p. 379). It is also significant that the original bill had proposed 50 per cent membership which had to be reduced to 25 per cent owing to strong opposition.

their attempt to improve their status. Strikes will always be regarded as sudden by the employers. Government will always endeavour to maintain law and order in case of strikes. The Act under the circumstances cannot unreasonably be characterised as reactionary, on the whole.

In almost every industrial country legislation has been provided to penalise strikes and promote peaceful settlements of disputes. Such legislation when wisely administered has not been without its use. It has not, however, put an end to industrial conflicts; and strikes continue even where they have been declared illegal. The explanation for the persistence of strikes lies in the double purpose for which it is employed. Firstly, it secures protection in the enjoyment of recognised rights, and such progress as society tends to sanction. But, in the second place, strikes have also a revolutionary character. It is a challenge in a capitalist society by a weaker party to the ruling interests. This is what makes compulsory arbitration in the long run a vain method of dealing with strikes.[1] In a capitalist society with its marked inequalities not only of income but of privilege and power, the strike is the inevitable weapon which the weak employ against the strong. In a country like India, where labour has not yet been properly organised, where the poverty of the working classes makes prolonged strikes difficult and agonising, and where the traditions of non-violence render unlikely some of the effects of strikes, to deprive labour of the right to strike can only mean the perpetuation of the poverty and helplessness of the working classes.

The Central Government has also replaced the Trades Disputes Act, 1929, by the Industrial Disputes Act, 1947, and provides for its uniform application throughout India. The Act incorporates all the important features of the Bombay Act. It authorises the setting up of a machinery for the double purpose

1 Cf. Tawney, "Acquisitive Society," 1922, p. 116: "The simplicity of the remedy is so attractive that it is not surprising that the Governments of industrial nations should coquet from time to time with the policy of compulsory arbitration After all, it is pleaded, it is only analogous to the action of a supernational authority. Compulsory arbitration is the opposite of any policy which such an authority could pursue either with justice or with hope of success. For it takes for granted the stability of existing relationships, and intervenes to adjust incidental disputes upon the assumption that their equity is recognised and their permanence desired. In industry, however, the equity of existing relationships is precisely the point at issue. A League of Nations which settled the quarrel between a subject race and its oppressors, between Slavs and Magyars..............on the assumption that the subordination of Slavs to Magyars was part of an unchangeable order would rightly be resisted by all those who think liberty more precious than peace. A State which, in the name of peace, should make the concerted cessation of work a legal offence, would be guilty of a similar betrayal of freedom. It would be solving the conflict of rights between those who own and those who work by abolishing the rights of those who work."

of prevention and settlement of industrial disputes. It empowers Governments, whether Central or Provincial, to require industrial establishments within its jurisdiction employing more than 100 members, to set up Works Committees, composed of an equal number of representatives, with a view to remove causes of friction in day to day work between employers and employees. The workers' representatives are to be appointed after consultation with the Trade Unions. This is the preventive machinery. The Act, further provides for the appointment of Conciliation Officers, Boards of Conciliation, Courts of Enquiry and Industrial Tribunals for the purpose of dealing with disputes when they arise or are apprehended.

A distinction is drawn between ordinary industrial establishments and public utility services. In the event of disputes arising in the former, Government may intervene through the conciliation officers, if it considers it expedient in public interest; but Government shall intervene only when a majority of persons belonging to both parties to the dispute apply to it for a settlement. But in the case of disputes in public utility services, Government shall intervene under all circumstances and appoint the necessary machinery according to the need of the situation. During the pending of settlement proceedings, strikes and lock-outs are prohibited.

By an amendment Act in 1950 provision is made for the establishment of a Labour Appellate Tribunal for hearing appeals from awards or decisions of Industrial Tribunals, Courts, Wage Boards and other Statutory Boards set up under Central or State enactments for adjudication of disputes. This gives scope for unnecessary and vexatious prolongation of disputes in which labour is further handicapped by the provision for being represented by lawyers before the Boards and Tribunals.

This new labour legislation passed by our national Government at the Centre and in the States (other States have enacted similar laws) must cause concern to labour in as much as the only weapon of labour against exploitation and injustice has been taken away. No doubt, at a time of crisis, the paramount need for the country is industrial peace. The great increase in the number of industrial disputes in post-war years was a cause of alarm, but mere legislation prohibiting strikes cannot solve the problem. It is regrettable that an Act like this should have been sponsored by a Premier who had himself opposed cumpulsory arbitration in the past. Industrial unrest is not peculiar to India but

is a world wide phenomenon. In England, even a Socialist Government was unable to prevent strikes. The last war has made the workers more and more conscious of their rights. They had to fight at every step for increase in wages. Employers with very rare exceptions have shown themselves hostile and continue to do so. It is not unnatural, therefore, that labour should get more and more restive. If the proper remedy for labour unrest is improvement in the condition of the workers, so that the immediate cause of friction might be removed, we readily recognise that our national Government have been moving in this direction. New Zealand was one of the first to introduce compulsory arbitration in the last decades of the 19th century; and yet it has not been a land without strikes. Absence of strikes moreover is not tantamount to industrial peace.

The laws dealing with our Trade Union development are a reflection of the development of capitalism in our country.

There has been of late a welcome change of attitude on the part of Government during the last few years. This change was reflected at the Tripartite Conference held at Naini Tal in November, 1952, when Mr. Giri, the new Labour Member of the Central Government who had been closely associated with the Trade Union movement, expressed his faith in direct negotiation and collective bargaining, instead of compulsory arbitration. The pronouncement has been welcomed by a representative of Employers—Mr. Naval H. Tata: "The history of compulsory adjudication," he observes, "emanating from our recent labour enactments, is not an inspiring one and has pleased neither party to the dispute. Furthermore, an overdose of unwanted adjudication has rendered the disease of industrial disputes chronic."[1]

The institution of the Tripartite Labour Machinery, the Labour Ministers' Conferences which are closely associated with this machinery and the institution of joint consultations in industry augur well for better industrial relations.

Minimum Wage Legislation

Alongside of collective bargaining there has developed of late in some countries the fixing of minimum wages by legislation. Proposals have long been mooted in various provinces of late for legislation in this direction. The Cawnpore Labour Enquiry Committee recommended fixing of a minimum wage of Rs. 15 per month. The Bombay Textile Labour Enquiry Com-

1 "Our Present Labour Laws," *Commerce* Annual Number, 1952, p. 40.

mittee which was asked to examine the wages paid to workers and to enquire into their adequacy or inadequacy in relation to a living wage standard, recommended an immediate increase in wages on a sliding scale, ranging from 3 annas in the rupee on a wage of Rs. 13-8 to an anna in the rupee in a wage of Rs. 75 per month. The Royal Commission on Labour observed that the majority of witnesses whom they examined desired the fixing of wages for industrial workers at a level sufficient to provide a reasonable standard of living. The Commission recommended that, before a minimum wage-fixing machinery could be set up, it was necessary to select the industries in which there was strong presumption that the conditions warranted detailed investigation, and that the conditions in such industries should be carefully surveyed. If the results of investigation indicated a need for minimum wage fixing machinery in certain industries, the necessary legislation might be undertaken.

The employers in India have never shown any willingness to adopt either a sliding scale or favour minimum wage legislation. The Cawnpore proposal of fixing the minimum of Rs. 15 per month was hopelessly inadequate. The argument on the part of the employers that either a fixed minimum or a sliding scale may be too liberal for the industry to bear is based upon the usual assumption in a capitalist society, that the primary concern in the working of an industry is the ensuring of profits, and not the welfare of the human labour that makes such profits possible. In a period of war stress, wage rates are automatically raised to secure maximum production. At the end of the war, employers have not found it difficult to pull down wages.

Although there is general agreement as to the beneficial effects of minimum wage laws on workers, it has been pointed out that there is a tendency for the minimum to become the maximum, and for reducing the differential between skilled and unskilled wages. The International Labour Conference adopted a convention in 1928, whereby the ratifying States agreed to fixing minimum rates of wages in poorly organised trades, where wages were exceptionally low. The Government of India declared their inability to enter into any commitment; nor did they give any indication of possible ratification.

It was in 1945 that the Tripartite Labour Conference approved in principle the enactment of minimum wages legislation. In 1946 a bill was introduced, but it was considerably delayed

in its passage, due to the constitutional changes connected with Partition. The Minimum Wages Act, "a new landmark in Indian Legislation," was passed by the Central Legislature in 1948. It covers all the States of India except Jammu and Kashmir. It applies to employments listed in a schedule appended to the Act, and may be extended, either by the Centre or the individual States, to any employment in respect of which it is of opinion that minimum rates of wages should be fixed. Among the employments listed in Part I of the schedule are employment in rice mills, flour mills, tobacco factories, plantations, oil mills, mica works, motor transport, and tanneries. Employment in agriculture constitutes Part II of the schedule. The Act requires the State or Central Government to fix within a specified period minimum rates of wages payable to employees in scheduled employments. These rates are to be reviewed at intervals not exceeding five years. The employer is bound by law to pay to every employee engaged in the scheduled employment wages at a rate not less than the minimum fixed by notification for that class of employees.

As regards the machinery for fixing minimum rates of wages the appropriate Government shall appoint a committee by notification in the Gazette and fix the minimum rates of wages after considering the advice of the committee, or the representations received on its own proposals. The Act also requires the Central Government to set up a Central Advisory Board for the purpose of advising in matters relating to the fixation and revision of minimum rates of wages, and for co-ordinating the work of the State Advisory Boards. The Central Advisory Board has been set up and the various State Governments have appointed competent authorities to ascertain, from time to time, the cost of living index numbers applicable to persons employed in the scheduled employments

It is difficult for any Government to lay down the principles by which minimum wages can be determined in any industry. Mr. Seebhom Rowntree in 1937 made an attempt to determine the minimum which an average family of five souls would require to buy the "necessities of physical fitness." Short of this there can be no satisfactory criterion for determining minimum wages. Minimum wages determined by the average wage usually obtained in sweated industries would mean perpetuating existing conditions; any attempt to alleviate these conditions by raising the wage level would be arbitrary if

it does not take into account the requirements of physical fitness. We need not suppose, however, that minimum wages would solve the general problem of industrial unrest, which goes to the very foundation of the present economic system. Behind the labour unrest is the urge that every human being should be treated as an end and not as a means, that there are rights which belong to him as an individual, which are denied to him so long as he is treated like a factor in production, on the same footing as capital and raw materials that enter into the production of wealth. The wealth that we produce in an economic sense is an instrument of well-being—and the well-being of labour is to be judged not by the amount they produce, but by the extent to which a richer and fuller life is made possible for them as for all others.

CHAPTER XXIV

INDUSTRIAL EFFICIENCY

The term efficiency in connection with human labour creates, it may be said, more problems than it solves. The classical economists conceived the problem as one of achieving the maximum return with a minimum outlay. From the point of view of the businessman, that method of production is most efficient which yields the largest output at the lowest money cost. Profit is the business test of efficiency, while production and costs are the tests applied by engineers or the general public. Where productivity differs greatly as between British and American mining, the overhead staff and equipment being practically the same, production is a good test of comparative efficiency. From the point of view of labour, that method is most efficient which yields the largest output at the lowest cost in terms of fatigue, monotony and accidents—the lowest human cost. In the last resort, it should never be forgotten that efficiency has to be judged by the relation between human costs incurred and human benefits produced, and one of the most difficult problems of social science is to devise a measure in terms of which they could be compared.

Efficiency in an individual may be defined as ability to bring his scarce resources, be they human labour, intellectual effort, or any material agent of production, to bear on the achievement of results in the productive process. Estimates of relative effi-

ciency in individuals or nations are sought to be arrived at by different methods; but each method has its own limitations.

Comparisons

Comparisons are sometimes made of the number of workers required in India and in other countries for accomplishing a certain quantity of work. Such comparisons disregard differences in the conditions of work, in machinery, in the nature of raw materials, climate, environment, and other factors. In spite of the difficulties involved in such comparisons of relative efficiencies of workers in different countries, it is not altogether valueless to consider estimates of the efficiency of workers in different countries on the basis of the evidence submitted to the Royal Commission on Labour by employers in India. Thus, according to the Cotton Yarn Association, Ltd., in a Japanese mill 18 operatives look after 1,000 spindles, whilst in India 30 to 31 operatives have to be employed for the same number of spindles. According to Mr. N. H. Tata on the average the spindle operation ratio was as high as 22 workers for 1,000 spindles, as against 6.7 workers in Lancashire and 4.5 workers in the U. S. A.[1] The comparison may be misleading, if interpreted too literally, but it conveys some idea of the difference. So also in respect of weaving 48 men are required to look after 100 looms in Japan, whereas in India 98 are employed. In the evidence submitted by Mr. Sasakura of Japan to the Labour Commission, the following table is to be found:—

	Total No. of operatives	Total wages bill per day Rs.	Wages per 100 looms per day Rs.
Japanese mill 840 looms	115½ (weavers)		
	140 (all girls)	334.21	39.78
Bombay Standard 840 looms	465	920.37	109.56
Manchester Mill (Bombay) 800 looms	318	680.78	85.09

With the introduction of efficiency schemes in a few mills in Bombay in 1927, it was expected that millowners would be able to rationalise their plants and standardise processes with a view to raising the level of output. Industrial unrest and falling prices had led the millowners of Bombay to introduce schemes of rationalisation. The effects of rationalisation upon the spinners are best ilustrated by the following table:—[2]

1 Quoted in "Economic Survey of Asia and the Far East 1950," U. N. 1951 p. 71.

2 "Wages and Unemployment in the Bombay Textile Industry," Government of Bombay, 1934, p. 17.

Number of Operatives Required to mind 60,000 Spindles

	Before Rationalisation		After Rationalisation	
Count	Ordinary Draft	High Draft	Ordinary Draft	High Draft
20	1,314	834	514	469
30	875	741	467	416
40	927	744	406	312
80	917	682	302	225

In view of the results indicated in the table, there is no wonder that with relative abundance of labour, there has been strong opposition to rationalisation schemes by labourers, due to fear of unempoyment and lowering of wages. It must, however, be remembered that the employers naturally resort to rationalisation in order to reduce costs of production, whenever there is labour unrest, and demand for higher wages which, if accepted, would neutralise the advantage of cheap labour. Ordinarily labour being comparatively very cheap, there is no incentive to introduce rationalisation.[1]

In the jute industry, it was pointed out in evidence before the Commission that "one foreign worker either in Dundee or the Continent has to do work that requires the services of two operatives in India." In the coal mining industry, where the wages are low and the workers are migratory and labour recruited from hill tribes, it was found that whereas in India 131 tons of coal were produced per annum per worker, in Great Britain 250 tons of coal were produced per worker, in America 780 tons, and in Transvaal 426 tons.[2] According to the Planning Commission, the output per man year has declined from about 127 tons in 1941 to a little over 100 tons in 1951.[3] In the iron and steel industry, the Indian workman was said to be not so strong physically as the European workman, and it was pointed out that the Tata Iron and Steel Works employed, in relation to output, a far greater number of workmen than similar plants did in Western countries. According to Mr. J. R. D. Tata, the output per worker in 1949 was half a ton a month as compared

1 The question of rationalisation was examined in detail by the Textile Labour Enquiry Committee set up by the Government of Bombay in 1938. Its remarks are interesting: "The employers and workers in our Province are opposed to each other on the subject of rationalisation. Both sides look at it more from the standpoint of their own respective interests than from that of the industry itself of which they are integral parts....One of the great dangers of rationalisation is that, unless it is gradually and scientifically carried out by co-operation between employers and workers, it would involve the industry in heavier losses on account of wastage of capital and constant labour disputes than would be the case if rationalisation were not introduced." (Final Report, p. 192). The Committee recommended the establishment of a Rationalisation Fund Committee consisting of representatives of employers, employees and experts.

2 Evidence of the Chief Inspector of Mines in India—Report of Labour Commission, Vol. IV, Part I, p. 234.

3 First Five Year Plan pp. 390-91.

with an average of 5 tons a month per worker in the U. S. steel industry.[1]

It has to be remembered that when comparisons of this kind are made, the conditions of work are not the same. Better facilities are given to the workers in foreign countries by way of tools and machinery than are given to Indian workers. On the other hand, it has been said that machinery is run faster in Eastern than in Western countries. In America, machinery is relatively cheap and labour dear. An attempt is, therefore, made to obtain maximum results by attaching vast amounts of machinery to one labourer. His productive capacity is fully utilised, even though he may have so much machinery under him that some of it is always idle. In America "human beings are paid the highest real wages on earth in order to let the machines do most of the real toil and make more machines."[2] In India conditions are very different. Due to cheapness of labour, maximum results are sought by applying a larger number of labourers to a single machine. The productive capacity of a machine has to be fully utilised, even though so many labourers are employed that some are always idle. "In the one case, machines are kept in abundance so as to derive the largest return from expensive labour, while in the other, cheap labour is kept in abundance in order to secure the largest return from the expensive machinery."[3]

It is also observed that the efficiency of Indian labour has improved during the past few decades. This opinion is not fully shared by all observers. The opinions of present-day mill officials are divided. There is undoubtedly improvement in the efficiency of labour, but the improvement in the product per machine has been greater. We have also the view expressed by the Tariff Board, when examining the case for protection of the match industry, that the number of employees in an Indian match factory "does not much exceed the standard prevailing in European countries," and "it is probable that in the immediate future the number will be still further reduced." It also refers to the remarkable progress in the efficiency of Indian labour, and observes that "there is reason to believe that, in a well-organised Indian factory, labour charges form a smaller item in the cost of manufacturing matches than is the case in other countries." A recent study of productivity in the Cotton

1 Speech at the Annual General Meeting of the Tata Iron and Steel Co., 1949.
2 Graham Hutton, "We too Can Prosper," 1953.
3 Buchanan, op. cit., p. 378.

Textile Industry shows a significant rise in productivity. The output per man year rose from 100 in 1946 to 123.2 in 1948, while the output per man hour increased from 100 in 1946 to 128.9 in 1948. The increase in output may be due to reduction in hours of work to 48 per week since August, 1946.[1] The Grady Mission in 1942 had found that lack of skilled labour was not a major barrier to Indian industrial development. The principal engineer of the Mission discovered that Indian workers earning 65 cents a day in poorly lighted factories were turning out excellent machine tools; and that productivity per man in the Tata Steel Works at Jamshedpur was as high as the productivity of American workers in similar mills in Pittsburgh.[2]

Factory Worker

Admitting, however, as correct the statement of the Royal Commission on Labour that the Indian industrial worker "produces less per unit than the worker in any other country claiming to rank as a leading industrial nation," let us briefly review the main characteristics of Indian factory labour, which may be regarded as weaknesses, and the causes that may be regarded as responsible for these deficiencies. We have already noticed some of these characteristics in other sections. Factory labour is recruited in the main from villages. The breaking up of the isolation of the village by better communications, and the prospect of finding employment in the town, attracted those landless labourers who were hitherto supported by the village in exchange for menial services. The farmers who were deprived of their lands by the money-lender, and those who farmed uneconomic strips of land, were also drawn to the town where they found work in the slack agricultural season. The factory worker who comes from the village keeps his family in the village, and goes back to the village for reasons of health or to attend to his farm. His work is, therefore, often irregular; he can never reconcile himself to the rigorous discipline of the factory. The Factory Labour Commission of 1908 observed that, "the Indian factory worker is in general incapable of prolonged and intense effort. He may work hard for a comparatively short period, but even in such cases the standard obtained is much below what would be expected in similar circumstances in any European country. His natural inclination is to spread the work he has to do over a long period of time, working in a

1 *Indian Labour Gazette*, December, 1952, p. 460.
2 Michael Straight, "Make This the Last War," 1943, pp. 131-32.

leisurely manner throughout, and taking intervals of rest whenever he feels disinclined for further exertion."[1]

The average worker in a textile mill, it was alleged by the Commission, spent from one and a half to two hours everyday in addition to statutory mid-day interval, away from his work. The loitering habit of the worker was accounted for by Dr. T. N. Nair in a dissenting minute attached to the Factory Commission's report as due to prolonged hours of work. It was 'a device to reduce the intensity of labour as a safeguard to his own physical well-being.' "The experience of other countries," stated Dr. Nair, "that short hours of work have also reduced the interruptions in the course of the day, has been realised at least in one mill in India, and in the face of this fact to charge the Indian labourer with ingrained habits of idleness is the refuge of the sweater." The Commission themselves recognised that, with a reduction in the hours of work and with better supervision, it was possible to train the workers to regular and steady habits.

Another characteristic of Indian labour is its intermittent character. Generally speaking, about 10 per cent of the labour force in any industry is always absent and not less than 30 per cent is off at harvest time. This feature of Indian labour is familiarly known as 'absenteeism.' Absenteeism, observes the Report of the Labour Commission, "is an omnibus term, covering absence from many causes. There are few managers who can say precisely which workers are away because they are idling, which are kept away by sickness, and which have gone on holiday meaning to return. Even workers who have left with intention of returning may be treated for a time as absentees."[2]

Few organised industries in India grant leave of absence with pay to workers. Absence without permission is punished by fines or dismissals. Moreover, jobbers treat workers who return after leave of absence as newly engaged workers from whom a commission must be taken for re-employment. Whatever the cause, absenteeism has been to some extent the result of a lack of provision for holidays and leave.[3] Such absenteeism results in a large amount of labour turnover in all industries. The Labour Commission found that in a large number of factories fresh

1 Report, pp. 18 *et seq.*
2 Report, p. 26.
3 Holidays with pay have been introduced from 1946 only.

employees engaged each month were 5 per cent of the total establishment, thus giving an annual turnover of 60 per cent. This high rate of labour turnover involves constant readjustment on the part of the workers to new factories and new machinery and methods. It also involves a lack of personal contact between the management and the workers and finally a loss of efficiency on the part of both management and labour. Another feature of Indian labour, as the result of the rural bias, is the relative inefficiency of the worker in the more skilled industries. It must be remembered, however, that organised industries have not been in existence in India long enough to give rise to a class of workers possessing the skill and dexterity of English or German workers.

The conditions under which the workers have to work are by no means satisfactory. In a hot country like India, the factories have been built on the models of British factories. They do not possess enough of light and ventilation. It is only comparatively recently that the Government of India appointed an expert to advise as to proper types of humidification devices which would not injure health. No adequate facilities are provided in the shape of proper seating arrangements, medical aid, pure water sanitary latrine arrangements, rest shelters, dining sheds and facilities for bathing so very necessary in a tropical country like India. All these are elementary facilities which would very favourably react on the efficiency of labour; and yet these have been sadly neglected by our capitalists in their greed for profits. Duties so grossy neglected by employers have been enforced by legislation. A Press Note (1937), which the Government of Bombay had to issue laying down its labour policy, made satisfactory dining accommodation and adequate medical aid a legal obligation on the employers.

We need not repeat here what we have said in another section regarding the insanitary living conditions and their effect on efficiency.[1]

Causes of Inefficiency

Leaving the discussion of the relative inefficiency of Indian labour, when we inquire into the causes of this inefficiency, we have to take into account a variety of factors. If, in the first place, industrial efficiency is to be traced back to racial characteristics in so far as such efficiency involves inventive genius and mental

1 See section on Efficiency and Environment in the chapter on "Industrial Labour."

ability in general, India has had a tradition going back to very remote times of having developed sciences like algebra and astronomy, medicine and architecture, as well as high industrial skill.

(2) Efficiency depends upon elements in the physical environment like temperature, moisture and the topography of the country. The heat and humidity in our country are unfavourable to a long life and to health and vigour. The damp air of the rainy season is exceedingly enervating; and there are months which are too hot for strenuous and quick movements. It is not surprising that under such conditions the factory worker is not stimulated to work by all the attempts on the part of his employer, nor increase his production. He refuses to be speeded up. The tropical conditions are also said to be favourable to the growth of pathological organisms. They bring diseases like cholera, malaria and hook-worm, which either cause premature death or sap the vitality of the workers. We must not, however, forget that human intelligence can considerably modify the operation of the conditions of human welfare concerned with climate and humidity. Micro-organisms can be brought under control, and diseases can be eliminated, as has been already done in Panama and Manilla and other parts of the world. The dry and hot atmosphere of the workshops can be changed into one of cool comfort by refrigeration and humidification. By a change in the working hours, much of the mid-day heat can be avoided.

(3) We have discussed elsewhere the low wages of the workers and their effect on efficiency.[1] If we compare the different centres of industry, we find that efficiency of workers usually varies with the level of wages. A gradual increase in the level of wages has been followed by an increase in efficiency as has been proved in the case of Ahmedabad. Wage levels in Ahmedabad were lower than in Bombay 35 years ago, and the Ahmedabad workers were less skilful than the Bombay workers at that time. The Ahmedabad wage level first caught up the Bombay level and then surpassed it, and to-day it is definitely higher. The Ahmedabad millowners admit that the efficiency of their workers has increased; and the Bombay millowners allege that it has so far increased that even with the higher rates, the labour cost per 1,000 spindles or 100 looms in Ahmedabad is lower than the corresponding figures in Bombay.[2]

1 See Chapter XXI.

2 D. R. Gadgil, "Regulation of Wages and the Problem of Industrial Labour in India," 1943, p. 85.

(4) A vital factor that has to be taken into account concerning the inefficiency of Indian labour is poverty and disease. The abject poverty of the people of India is a truism. Even the British Government on various occasions admitted the existence of poverty among the masses. Thus to take an illustration: "There is a vast amount of what can only be termed dangerous poverty in the Indian villages—poverty that is to say of such kind that those subject to it live on the very margin of subsistence."[1] It has been calculated that the annual amount of grain available for food from 1900 to 1922 was only 47.8 million tons as compared with 81 million tons required for the population. In other words, food consumption in India fell short of the needed consumption by more than a third.[2] As we have shown elsewhere, the *per capita* amount of food consumed by the industrial worker has been even below the prison ration.

With starvation there is disease. Small-pox, cholera and influenza are always with us. It has been said that the entire rural population in Madras and 70 per cent of the population in Bengal suffer from hook-worm. The causes for the prevalence of disease are sought in ignorance and poverty. Some people lay a large share of the blame on climate; there are others who assert with greater reason that assuming sanitary surroundings, proper food and housing and proper rules of hygiene, there should be no more room for diseases on a large scale in warm countries than in cold. Major Norman White, the Sanitary Commissioner with the Government of India, declared in 1917 that the weaker physique and lower vitality of the Indian worker which have caused him to be labelled "inefficient" are due to removable pathological causes such as malaria and hook-worm infection. Both are prevalent in India and both are preventable. Experiments have shown that the output of labour which has been treated for hook-worm has increased by as much as 25 per cent and this surprising increase in efficiency has been accompanied by a reduction of disease of all kinds.[3] A dispassionate American observer, writing in 1934 remarked, "India is only at the dawn of the age of hygiene and is great breeding ground for some of mankind's most virulent disease enemies."[4]

Apart from hook-worm, the commonest disease in India is

1 "Moral and Material Progress in India," 1927-28, p. 97.

2 Zutshi, "Population and Subsistence in India," in *Modern Review*, September, 1927.

3 Pillai, op. cit. p. 249.

4 Buchanan, op. cit. p. 384.

malaria. "No part of India is free from this scourge and the number of days of work which are lost every year on this account must run into many millions. The members of every class and occupation in India are affected and not only the actual days lost are to be counted but the weakening effects of malaria on the human system must also be taken into consideration, for it saps the energy and reduces the efficiency of its victims."[1] This is true even today in India after a quarter of a century despite tremendous progress in medical science which has made malaria a thing of the past in the Western world. Besides malaria, there are diseases due to diet deficiencies, rickets claiming 2.3 million cases, and night blindness claiming 3.6 million victims. Cases of tuberculosis are estimated at 5 million.[2]

That India has not improved in health in recent years is indicated by the fact that there is hardly any substantial improvement in the average length of life among the people since 1881, whereas in England and Wales it increased from 42 years in 1885 to 47.8 years in 1910 and 63 at present, and in America from 43 years in 1890 to 62 in 1938.

The poverty of the labourer is explained as due to their inefficiency; but it is easily forgotten that low wages are as much the cause as the effect of the inefficiency of labour. In this connection, the Rege Committee observe: "It has been fashionable for a number of years now to justify the low wage level of the Indian industrial worker on the ground of his alleged inefficiency. Numerous comparisons are often attempted such as that an average Lancashire girl in a weaving shed can do the work of six Indian cotton mill operatives, etc. Such opinions usually emanate from individual employers who desire to sweat their labour. Very few time and efficiency tests are taken. Efficiency in the weaving shed does not necessarily depend upon the efficiency of the operatives, but is largely dependent also on the efficiency of the machinery, the conditions of work, and the efficiency of the management itself." "The alleged inefficiency of the Indian workers is largely a myth."[3]

(5) Next to disease, ignorance as indicated by illiteracy and absence of training opportunities may be regarded as another factor responsible for inefficiency. A very small proportion of the factory workers are able to read and write in any language.

1 "Moral and Material Progress in India," 1927-28, 14-15.
2 See section on Positive Checks in the chapter on "The Human Factor."
3 Report, pp. 381-2.

For many years, there has been a demand for establishing schools in factories where those who work half time can be educated. Generally, there has been small attendance in the schools owing to indifference on the part of employers and employees alike. Children of 9 to 14 who had worked half day were not in a fit condition for study. It often happened that officers took half-timers to work as full timers when the supply of labour was short. The employees were half-hearted. Adult education has just been started on a voluntary basis. As for technical education, as the principal of a technical institute in his evidence before the Industrial Commission observed, "At present there no means for Gujarati speaking men to understand the principles" of mechanical engineering. In 1939-40, there were only 9 engineering and technical colleges and 642 schools in the whole of India for industrial education. Despite some improvement in recent years, much leeway is yet to be made.

(6) We have discussed elsewhere the bearing of our social and cultural institutions on economic life. It has been alleged that one of the causes of industrial inefficiency is the religiosity and other worldliness of our people. Is it necessary to refute in detail such a wide generalisation? There is hardly any religion in the world which has not exalted the spiritual above the material, and has not dwelt on the momentariness, even the sordidness, of earthly goods and gratifications. We should then have to say like the Russians in the early days of their socialist experiment, that religion is an opiate of the people, for it teaches them to put up with poverty and disease and even injustice. And yet, it is interesting to note that those who bring forward this charge of other-worldliness against India are themselves most piously shocked at the godless State which socialism or communism is supposed to represent! Thus, if it be said that the Law of *Karma* saps economic incentive today, and *Moksha* is but a solace and escape from life for the incapable, it only means that we have to search deeper into the causes of this pathological outlook on life into which a whole people has landed itself.

(7) We must certainly take account of the social environment in considering the causes of industrial inefficiency. The caste system has often hindered free mobility of labour. Most of the important industries have drawn the lower classes, generally devoid of education. The *zenana* which is a Mohammedan custom has influenced the Hindus, and has interfered with the freedom of action of women, and deprived them of educational opportu-

nities. To that extent, it prevents India from fully utilising the physical and mental resources of a third, if not half, of the industrial population.

(8) Another important point that is many a time overlooked while discussing the efficiency of labour is the comparative inefficiency of management. This cause may not be found in all cases. But there can be no doubt that in some cases inefficient management is responsible for a comparatively inefficient output.

When we talk of the low efficiency in Indian labour, we must remember, as Buchanan points out, that "Indian labour has had much to contend against in a trying climate, inefficient management, poor materials (especially in cotton) and a low standard of living, aggravated by an oversupply of labour and intense competition."[1]

As the Labour Investigation Committee remark: "To sum up, considering that in this country hours of work are longer, rest pauses fewer, facilities for apprenticeship and training rarer, standards of nutrition and welfare amenities far poorer and the level of wages much lower than in other countries, the so-called inefficiency cannot be attributed to any lack of native intelligence or aptitude on the part of workers."[2]

It must also be remembered that in Western countries in large-scale enterprise the feeling on the part of the worker, that he is a mere cog in a huge machine, a check number filed away in the records, is overcome partly by trade union organisations, partly by the greater participation of labour in industrial government, partly by the break up of the big business into departments to make the purpose of a job more intelligible to the worker. In our country trade union organisation is in its infancy, and the level of education of the mass of workers makes it difficult to establish or inaugurate a policy of "informed joint control." Moreover where, as in India, the average level of wages is so low, the "trans-pecuniary" motive of what can be brought *through* the wage which operates in America has no room or relevancy. Where the average worker in a city cannot claim even a decent room to live in, there is no possibility of putting in extra effort for adorning the room or having a few amenities and gadgets.

"The most significant factor in America leading to high production at low cost is efficient management."[3] Such management

1 Op. cit., p. 386.

2 Report, p. 383.

3 Conclusion No. 1 of Management Accounting Team Report. Quoted by G. Hutton, op. cit. p. 35, foot note.

demands training of personnel from shopfloor to office, both within and outside the firm, proper methods of spotting managerial talent, and organisation of managerial skills to secure the most efficient and economical controls over productive processes.[1]

In India the economic policy of the British Government—or shall we say the lack of it?—retarded the growth of modern industries. The indifferences towards problems of health and education contributed towards this retardation. Subjection involved a moral degradation, the loss of initiative and enterprise and the presence of an inferiority complex, all of which had a direct bearing on industrial efficiency.

The problem of efficiency of workers and their productivity acquired importance during the war period due to the exigencies of war demands. It was in this period that the Anglo-American Council on productivity was established. Scientific investigations were carried on in this connection both in U.S.A. and in England. The problem has assumed considerable significance in our country also, as the war time peak production level has not yet been reached in all the industries, despite a favourable trend in the last two years, and specially from the point of view of the successful implementation of the First Five Year Plan, and of raising the standard of living of the workers. The employers have complained that productivity per worker has been going down, whereas the spokesmen of workers blame it on poor and inefficient management and equipment. The fall in productivity need not be ascribed to workers only. It is true that the total money wages paid to workers are much higher than the pre-war level. But we have to note a still greater rise in the cost of living.[2] Further, the rise in wages, dearness allowance, bonus, etc., given to the workers are not a favour done to them, but a reluctant recognition of labour's rightful claims. This recognition was forced upon the capitalists by awakened labour, backed by the tardy but essential government sympathy. The contrast of very high profits cannot be forgotten in this context. Moreover, the reckless exploitation of equipment by the capitalists in their greed for high profits, lack of or inadequate renewals and replacements and a deplorable fall in the standards of management, are responsible to a great extent for the fall in general productivity. We must also note the fall in real wages, specially in the standard of nutrition during the last decade as seen in the calorie intake in

1 G. Hutton, op. cit. pp. 129-30.
2 See Section on Wages during War and Post-War period in chapter XXI.

India, the effects of which are bound to be felt by productivity, sooner or later. The toll taken by this lack of adequate and wholesome food will be felt probably in the next generation, when the children of the present generation become adult workers.

There is an urgent need for a scientific enquiry into the question of productivity. But, as the Planning Commission point out, "Such investigations presuppose the existence of trained personnel, reliable industrial statistics, and a scientific attitude on the part of organisations of employers and workers. None of these conditions exist in the country today, and much preparatory work is needed."[1] A team of productively investigators under the Technical Assistance programme is to be invited to train officers in developing methods of productivity. The I.L.O. has formulated a scheme for technical assistance in the field of system of payment by results and productivity, and a team of five experts will introduce this scheme in selected plants in the Engineering and Textile industries. "Training within industry" programme is closely connected with this, and this enables supervisors to play a vital role in the operation of the industry. The scheme is intended to improve supervisory skill by job instruction, job relations and job methods. Some valuable experiments have been carried out by the Ahmedabad Textile Industry's Research Association with the help of I.L.O.'s Asian Field Officer on Technical Training in connection with job instruction. The results of the experiments have shown an increase in production from 7 to 18 per cent in different sections of the spinning department and 11 to 30 per cent in sections of the weaving department.[2]

A composite scheme for a Central Labour Institute in India to be established under the American Programme of Technical Assistance has been formulated for research and imparting specialised training in problems of industrial labour. The scheme comprises (1) a Museum of Industrial Safety, Health, and Welfare, (2) an Industrial Hygiene Laboratory, (3) a training centre and (4) a library-cum-information centre. It is expected to be completed in five years.

Planning the entire economic life in all its aspects alone will make it possible for India to develop her natural resources with the help of labour that can compare in efficiency with labour in other countries. The problem of efficiency is not a question merely of

1 Op. cit. p. 591. Statistics however, can be manipulated to establish foregone conclusions; and scientific investigations may be made subservient to predetermined attitudes.

2 First Five Year Plan, pp. 591-2.

getting more output from labour. For as Marshall observed, whereas in the case of the non-human factors of production our objective is minimum cost, here, in the case of labour, the objective is not only a higher standard of life for the labourer, but the creation of an environment in which labour feels that it can co-operate on a footing of equality with the owners of capital, and has, therefore, a voice in the shaping of industrial policy.

When all is said and done, there is one final consideration that should not be lost sight of. It has been said "nations live as they deserve." If our people have, hitherto, been lacking in education, technical skill, nutrition and energy, they have had naturally to be content with a low material standard of life. Today we have acquired independence. A Five-Year Plan has been launched and is already being implemented. Government is sympathetic to labour aspirations. Labour legislation in recent years is symbolic of the growing awakening on the part of workers to a sense of their own rightful place in the economc life of the country. A better climate has been created for harnessing the support and co-operation of the working classes in stimulating the production of the country. Will labour respond to the call?

CHAPTER XXV

FISCAL POLICY

Government in Relation to Industries

The traditions of *laissez faire* to which Great Britain was committed were brought to bear upon the attitude of the Government of India towards industries from 1857, when the Crown took over the responsibilities of governing India from the East India Company. In earlier days, Indian industries had always expected and received support from the rulers of the land. The bulk of Indian educated opinion was convinced from the beginning of the present century that industrialisation was a necessity for India, and that Government should actively assist this process by legislation. Sir Alfred Chatterton in the Madras Presidency was the first to start with Government support an aluminium industry. This was followed by the introduction of chrome-tanning which led to the establishment of a vigorous industry. In 1905, a separate Department of Commerce and Industry was created in the Government of India. In 1908, a Director of Industries was appointed in Madras. There was a prospect of other Provincial Governments following in the wake of Madras, which was, how-

ever, checked by an unexpected pronouncement in 1910 by Lord Morley. In a despatch to the Government of India, (July, 29th, 1910) refusing to approve of the creation of a Department of Industries in Madras, he wrote, "The policy which I am prepared to sanction is that the State funds may be expended upon familiarising the people with such methods of production as modern science and the practice of European countries can suggest; further than this the State should not go, and it must be left to private enterprise to demonstrate that these improvements can be adopted with commercial advantage." These orders resulted in the abolition of the Department of Industries in Madras.

A strong protest was lodged by the Indian Industrial Congress. In 1911, the Madras Legislative Council adopted a resolution inviting the Secretary of State to reconsider his decision, and the proposals of the Local Government were supported by the Government of India. The Department of Industries in Madras was reconstituted in 1914. The war compelled the Government to abandon its *laissez faire* attitude, and to develop a number of industries with State assistance and under State management. Summing up the position before the outbreak of the first world war, the Industrial Commission observed: "This account of the effort made by Government for improvement shows how little has been achieved owing to the lack of a definite and accepted policy, and to the absence of an appropriate organisation of specialised experts."[1]

The Indian Industrial Commission was appointed in 1916 with Sir Thomas Holland as President to report upon the possibilities of further industrial development in India. But their activities were limited by the proviso that their recommendations should not be incompatible with the existing fiscal policy of the Government of India. The Commission presented their final report in 1918. Their recommendations involved two fundamental principles: (1) that in future Government should play an active part in the industrial development of the country, and (2) that Government cannot undertake this work unless it was provided with adequate administrative equipment and with reliable scientific and technical advice. The main activities of Government were to include research, industrial and technical education, commercial intelligence, direct assistance both technical and financial, and the purchase of stores.

It is, the Commission observed, a most important duty of the

1 Report, p. 82.

Government of India to provide the machinery required to ensure that uniform development alone will make the country self-contained, both economically and for purposes of defence. From this point of view, India's most prominent present deficiencies are the absence of provision for the smelting of metals and consequent production of alloys, the manufacture of chemicals and rubber, and the utilisation of the natural wealth of the forest for the recovery of drugs, essential oils and dyes. In addition to the production of these essential materials, the organisation on a large scale is also necessary of manufacturing operations for the production of articles, many of which will probably not be undertaken in the near future without some form of Government guarantee or support. This applies especially to the manufacture of electrical machinery, internal combustion engines, machine-tools and heavy steel forgings.

Critics of the Industrial Commission have remarked that the appointment of the Commission was a time-serving proposition. Apart from the exclusion of the fiscal issue in the terms of reference, the actual development of events might appear to lend support to such a criticism. No action was taken on the recommendations of the Commission. After 1918, the few industries which had been established either stagnated or decayed due to lack of protection.

In the meantime industry became a provincial subject under the Reforms Act of 1919. The responsibility for industrial development devolved upon the provinces with their limited financial resources and still more limited technical equipment.

That the recommendations of the Industrial Commission were frustrated by the Reforms Act of 1919 is acknowledged even by A. G. Clow, who claims to give us an objective statement of the history of the relations between the State and Industry in India under the Reforms Constitution. "The general result was a separation of the spheres of influence of the Central and Local Governments in respect of the development of industries. . . Local Governments . . . had to face serious financial difficulties, and the two features which the Industrial Commission had regarded as the chief obstacle to progress, namely, the lack of a definite and accepted policy and the absence of an appropriate organisation of specialised experts, remained after the reforms."[1] There can be no more convincing evidence of the fact that the recommendations of the Industrial Commission were torpedoed by the Reforms Act

1 A. G. Clow, "The State and Industry," 1928, pp. 24-5.

of 1919 than this "objective" statement in an official publication with the "general approval" of the Government of India.

Fiscal Policy: Early History

In the early days, the East India Company was interested in improving those Indian industries from which its export trade was largely drawn. The company looked with favour upon the manufacture of cotton and silk piecegoods, although such a policy met with opposition from vested interests in England. These were "at one time sufficiently powerful to insist that the Company should concentrate on the export from India of the raw material necessary for manufacturers in England."[1] During the 19th Century, *laissez faire* views gradually gained ground both in England and in India. The East India Company working in co-operation with English industrial interests used the tariff in a manner harmful to Indian cottage industries. The duties on raw produce were at the rate of 3½ per cent, while those on manufactured articles ranged upto 5 per cent. After the repeal of the Corn Laws in 1846 in England, a new policy of free trade was foisted on the British Dominions overseas. What was good for England was assumed to be good for her colonies and dominions; and the very country, which had imposed high import duties on articles like cotton and silk goods from India, now preached the gospel of free trade. When the Crown took over the administration of India from the Company, budgetary difficulties compelled increase in import and export duties in spite of the free trade slogan. In 1859, the general rate of import duties was raised from 5 to 10 per cent and the duty on cotton yarn from 3½ to 5 per cent. In 1874, the Manchester Chamber of Commerce in a memorial to the Secretary of State stated that, under the 3½ per cent duty on cotton goods, a protected cotton manufacturing industry was springing up in India. A Committee appointed in 1874 by the Government of India rejected the demand for repeal of the cotton duties. The Secretary of State asked for explanation why changes were not submitted for his approval first, and observed that "Parliament will not allow the only remnant within the direct jurisdiction of the English Government to levy protective duty hostile to English manufacturers." "Whether the question be regarded as it affects the consumer, the producer or the revenue, I am of opinion that the interests of India imperatively require the timely removal of a tax which is at once wrong in principle, injurious in its practical effects and self-destructive in its operation."

1 Industrial Commission Report, para 105.

In 1879, Parliament passed a resolution recommending the removal of duties on cotton in India. The Finance Member, Sir John Strachey, in his financial statement observed that cotton goods were the sole articles of foreign production which people consumed in India, and there was no possibility of deriving a large customs revenue from anything else. In 1894, with the fall in the sterling value of the rupee, fresh taxation was necessary and Government proposed a general tariff of 5 per cent on all imports. The Secretary of State removed coton yarn and cotton piecegoods from the list, and subsequently agreed to the inclusion of cotton goods on condition that a countervailing excise duty was imposed on cotton goods manufactured in India. Accordingly in 1895, the 5 per cent import duty on cotton piece-goods and cotton yarn was supplemented by a 3½ per cent excise duty in India. The Finance Member had to admit that only about 6 per cent of the Indian manufactures entered into competition with Manchester goods, and that in spite of his conviction he had to obey orders imposed from above.

With the outbreak of the war in 1914, the tariff rate was raised from 5 to 7½ per cent, the duty on imported cotton goods being included in the list. But the excise duty was left untouched in spite of agitation from India. Even the London *Times* commenting on this agitation had to observe: "The Indian cotton excise duty has always been politically, economically and above all morally indefensible. Opposition to it unites every class in India, from the official members of the Government to all members of the Indian community. It has made a grave breach in the moral basis of the British control of India."[1]

Generally, it may thus be observed that the fiscal policy of the Government of India remained based upon Free Trade principles down to 1923. If higher levels in tariff rates were adopted, they were adopted for purely revenue purposes.

Fiscal Autonomy Convention

The war of 1914 had brought about the establishment of a few industries and had aroused public interest in the possibilities of protection. The Industrial Commission had stressed the necessity for industrialisation in India. In 1921, the Secretary of State in a despatch to the Government of India, accepted the principle underlying the Fiscal Autonomy Convention, which had been recommended in 1919 by a Joint Select Committee of both the

1 London *Times*, March 5th 1917, quoted by C. N. Vakil in "Industrial Policy of India," p. 43.

Houses of Parliament. The Select Committee observed, "In the opinion of the Committee, the Secretary of State should as far as possible avoid interference on this subject, when the Government of India and its legislature are in agreement."

Fiscal Commission

In 1921, a Fiscal Commission was appointed to examine the tariff policy of the Government of India with Sir Ibrahim Rahimtoola as president. The Majority Report recommended a policy of 'discriminating' protection of a halting character, in spite of potentialities hitherto smothered for an all-round industrial development. There can be no doubt that the term, 'discriminating', was intended to give a semblance of respectability to the recommendations of the Commission, for no one desired an indiscriminate tariff policy for this country. The use of the term was an indication of a half-hearted compromise on the part of men afraid, perhaps, of being charged with revolutionary proposals in a field, where free trade had been accepted by economic orthodoxy as a sound principle. The formula adopted by the Fiscal Commission laid down the general conditions to be satisfied by an industry before protection could be granted: (1) The industry must be one possessing natural advantage, such as an abundant supply of raw material, cheap power, a sufficient supply of labour or a large home market. No industry which does not possess some comparative advantages will be able to compete with them (successful industries of the world) on equal terms. (2) The industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country. (3) The industry must be one which will be able to face world competition without protection. . . . . The protection we contemplate is a temporary protection to be given to industries which will eventually be able to stand alone. Another class of industry which should be regarded with a favourable eye is that, in which there is probability that in course of time the whole needs of the country could be supplied by the home production.[1]

The Minority Report signed by the President and four others stated that their reasons for writing a dissenting minute were: (a) "The main recommendation has been hedged in by conditions and provisos which are calculated to impair its utility. (b) In places the language is half-hearted and apologetic. (c) We are unable to agree with the views of our colleagues on Excise, Foreign Capi-

1 Fiscal Commission Report, pp. 45 *et seq.*

tal, Imperial Preference, and the constitution of the Tariff Board."

The main criticism that can be offered about the three conditions on which discriminating protection was to be granted is that the Commission failed to take a proper view of the industrial problem of the country as a whole. An industry which applies for protection must show that it is one possessing natural advantages. Does this mean that it must possess all such advantages? Obviously this could not be the interpretation. The enumeration of the advantages was only illustrative. Otherwise the words "such as" and "or" could not have been introduced. Moreover, no country in the world has been able to develop its industries without the advantage of an early momentum, or a protective policy. Quite apart from protection, the Governments of civilised countries have fostered their industries by shipping facilities, by the grant of bounties, by favourable railway rates, by industrial research, and even by active control and guidance of industrial enterprises. Never in the history of any country was protection granted in such a half-hearted, halting, reluctant manner as in India, a country ailing from all the ills of an unbalanced economy, predominantly dependent on agriculture, and possessing immense potentialities for industrialisation.

The Majority Report observed in conclusion, in a most apologetic manner that the industrial development of India would not take place at the expense of British interests. "India," they observed, "for many years to come is likely to concentrate on the simpler forms of manufactured goods and these are precisely those in which the United Kingdom has the smallest interest. Growing prosperity will bring a wider range of needs and these will be translated into a more extensive demand for British goods."[1] The Minority were more frank when they stated, "We believe that the industrial backwardness of India is in no way due to inherent defects among the people of India, but that it was artificially created by a continuous process of stifling, by means of a forced tariff policy, the inborn industrial genius of the people."[2]

The Tariff Board

Following upon the Report of the Fiscal Commission, a resolution was adopted by the Legislative Assembly in 1923 recommending to the Governor-General in Council among other things: "in order that effect may be given to these recommendations (of the Fiscal Commission) a Tariff Board should be constituted

1 Fiscal Commission Report, p. 148.
2 *Ibid.*, p. 180.

for a period not exceeding one year in the first instance, that such Tariff Board should be an investigating and advisory body and should consist of not more than three members, one of whom should be a Government official; but with powers to co-opt other members for particular inquiries." The Tariff Board usually consisted of a President and one or two members. The tenure of office varied from a few months to as much as eight years. The Fiscal Commission had suggested the establishment of a permanent board, with a view to securing a continuity of policy. The actual practice of appointing different boards at different times made for inefficiency. Such a pactice hampered quick decisions. The procedure adopted in the working of the Tariff Board was also significant. In the first place, there had to be an elaborate application by the industry concerned to the Commerce Department; if the Commerce Department was satisfied that a *prima facie* case had been made out, the application went to the Tariff Board. In the next place, the Board issued a communique inviting representations from industrialists and also a questionnaire. The Board visited factories, collected relevant data and recorded written statements in addition to oral evidence. Thirdly, the report of the Board was submitted to the Commerce Department that had to decide whether any, and how much, protection should be granted. Fourthly, the proposals were embodied in a Bill for the consideration of the legislature. As such a bill was a money bill, the legislature had no right to increase the rates of duties proposed. Fifthly, the Governor-General could exercise his power to veto if he so chose. There could not be a more effective method of delaying and stifling any proposals for protection which involved a conflict of interests between Britain and India.

Case for Protection

The main argument of the classical economists in favour of free trade is the theory of international values based on comparative costs and geographical division of labour. Trade unhampered by restrictions is mutually beneficial both as between individuals and classes within any single nation, and as between one nation and another. Those, however, who unquestioningly accept the free trade principle forget certain historical facts which have determined the evolution of this principle. Economic theory in England is an analytical study of its mechanism of economic life. If England adopted a free trade policy from the early years of the last century, abandoning mercantalism which is another form of protection, it was the result of the historical accident that the in-

dustrial revolution first started in that country in the field of textile and engineering industries at a time, when she had a large market not only in her own dependencies, but in the industrially backward countries of the world. Classical economic thought in England reflected economic practice and was dominated by the assumption that a principle which favoured the growth of economic life in England would equally favour the development of other countries. As a matter of fact Germany and the U.S.A. revolted against the dogma of free trade and built up their industries by a policy of protection.

In the second place, after the end of the first world war the world as a whole definitely abandoned the free trade policy; and almost every country was urged by a desire for economic self-sufficiency to put up trade restrictions and tariffs, destroying the last vestiges of free international trade. Instead, trade was carried on by unilateral or bilateral agreements. Even Great Britain abandoned her free trade policy in favour of a scheme of preferences within the Empire, which meant a protective policy against the rest of the world.

Moreover, when it is asserted that free trade between one nation and another is mutually beneficial, there is an assumption that the nations do trade freely on a footing of equality, that neither political dependence of one country upon another, nor the accidents of historical evolution, exist to defeat the free flow of surplus goods.

It is a historical fact that in the early days of the Company, India had a comparatively balanced economic life exporting only its surplus luxury goods which lured the commercial interests of Great Britain. In the course of the 19th century this economic balance was lost. The disappearance of cottage industries due to the influx of cheap machine-made goods resulted in the loss of its occupational equilibrium, compelling the country to fall back on an already overtaxed agricultural production with a resultant diminution in wealth. Under these circumstances, the free exchange of raw material for finished goods, however much it may have benefited Great Britain, could never be said to have benefited India. If free trade between India and Great Britain has brought about an increasing ruralisation in the country with an increasing population of unemployed or half-employed labourers on land, it is little comfort to be assured that the consumers in India have benefited by cheaper imports.

The only sound basis on which India can justify protection is

the claim for economic self-sufficiency. Economic dependence in the shape of a one-sided exchange of raw materials for finished goods may not be desirable from the point of view of one of the parties to the exchange. "International commerce between nations that are equal in status, that enjoy equal opportunities for making free contracts, that exchange not raw materials for finished goods," but genuine surpluses which involve no sacrifice for consumers "is alone beneficial to humanity; such commerce redounds to the mutual benefit of both parties to the exchange. But a one-sided trade relation in which a dependent country year after year parts with its very life-blood in the shape of food and raw materials to another country that gives its tawdry manufactures in exchange is the simplest type of economic exploitation, the obviousness of which escapes notice only by the magnitude of the scale on which it is carried on."[1]

Protection at its best is the assertion of the principle that the function of the State is not confined to securing peace and order but extends far beyond to the ordering and regulation of the material conditions for the growth of a commercial life. It is based on the idea that every social group calling itself a nation shall employ its organised efforts for securing the conditions of a full life for its members. If during the days of the second world war India was called upon to devote all its resources to the multiplication of the arms and equipment necessary for waging war, we might well insist that in times of peace all our resources should be utilised for the promotion of our well-being, not only by tariffs, but by the fostering of technical education, by the organisation of pioneer industries, by granting of loans and credit facilities, and in the last resort by socialising all industries connected with our national welfare by legislative control, if not by direct management. Whatever the United Kingdom and the U.S.A. may say, it is not possible for relatively backward countries to sacrifice tariff autonomy in the interests of so-called "international co-operation."[2] Though we plead for protection with a view to rapid industrial development and to securing a balanced economic life, we are forced to take note of the regrettable fact that protected industries like cotton and sugar have failed to do their duty towards the masses during the crisis of the second world war and the post-war years. They have been callous and indifferent to the interests of

1 P. A. Wadia, "The True Basis of Protection for India" in *Economic Journal*, June, 1924.

2 It is interesting to note that despite all talks of "international co-operation," U. K. and U.S.A. have not yet ratified the Havana Charter and that the international organisations like I. M. F. and I.B.D.R. follow a discriminating policy with reference to Asiatic countries as against Western countries.

the consumers; they have been equally apathetic towards labour; they have subordinated all other considerations to profit making. In the light of this experience, it is essential that the grant of protection to any industry must be conditional on safeguarding the interests of labur and consumers. If any industry refuses to accept these conditions, and yet needs protection in national interests, the only remedy would appear to be nationalisation of the industry. The grant of unqualified protection to industries in private hands is absolutely undesirable. Our industrialists have been weighed in the balance and found wanting.

Discriminating Protection at Work: (a) Iron and Steel Industry

Following the resolution of the Legislative Assembly in 1923, the first industry to apply for protection was the Iron and Steel industry. After the end of the first world war, this industry had to meet the competition of foreign producers. There was dumping by foreign producers. The Tariff Board of 1924 found that the industry satisfied all the three conditions laid down by the Fiscal Commission and that it was also entitled to protection as a basic industry. The Board recommended duties ranging from Rs. 30 to Rs. 45 per ton on rolled steel and also duties on wrought iron, railway wagons, tin-plates, wire and wire-nails and agricultural implements. When it was found that these duties were not a sufficient protection against dumping, further increase in duties was urged by the Board. Though Government recognised the need for protection, they preferred the grant of bounties not exceeding Rs. 50 lakhs in any year. Accordingly, bounties at the rate of Rs. 20 per ton on 70 per cent of the weight of the steel ingots produced, subject to a maximum of Rs. 50 lakhs, were paid during 1924-25. The Finance Member gave as a reason for preferring bounties to import duties the excessive burden on consumers of steel which additional import duties would involve. In 1925, the Board was again asked to examine the question of protection, and they recommended a bounty of Rs. 18 per ton for a period of eighteen months ending March, 1927, subject to a maximum of Rs. 90 lakhs. The Government, whilst they accepted the finding of the Board that further assistance was necessary, reduced the bounty from Rs. 18 to Rs. 12 per ton, and the maximum amount from Rs. 90 lakhs to 60. As the result of protection, the production of finished steel increased to an appreciable extent. The differential duties levied in 1927 to give preferential treatment to British as against non-British steel has been said to be instrumental in delaying the rapid development of the Indian industry.

The next phase in the history of the iron and steel industry was the Ottawa Trade Agreement of 1932 by which the import duty on galvanised sheets imported from non-British countries was fixed at Rs. 83 per ton, while that on sheets imported from Great Britain was reduced to Rs. 53 per ton, if the sheets were made of non-Indian steel, and Rs. 30 if made of Indian steel. British manufacturers were to use Indian steel as far as possible. India also retained the right of free entry for Indian pig iron and steel. It was a curious method of applying the principle of discriminating protection to send the raw material abroad to be finished into the final product. The Tariff Board of 1933 declared: "The renewal of the Agreement in its present form will be impracticable." They noted with satisfaction the progress made by the industry, in capturing 72 per cent of the Indian market, in reducing work costs, and in modernising its plant. They recommended the imposition of excise for replacing the customs revenue lost to Government by reason of the policy of protection. Government preferred equalising duties to the removal of the revenue duties on imports and levied an excise duty of Rs. 4 per ton on steel ingots produced in India and countervailing duties on imports. Whilst the duties on non-British steel ranged from Rs. 25 to Rs. 43 per ton, they were only 10 per cent *ad valorem* on British steel.

Despite the halting character of protection granted, the production of steel ingots expanded from 131,000 in 1923 to 1,070,000 in 1940. The industry had practically become independent of protection by 1939, though protection was formally withdrawn in March, 1947, except on certain special items.

(b) Cotton Textile Industry

We have given elsewhere a brief history of the development of the textile industry. The growth of the industry in India led the Lancashire interests in England to agitate for the exemption of British goods from the import duty on yarn and cloth. This exemption was secured in 1878. When import duties were reimposed in 1894 for revenue purpose, Lancashire interests were again instrumental in the levy of an excise duty in India on cloth manufactured in India as a countervailing measure. This excise duty remained a patent illustration of the domination of Lancashire interests in Indian financial policy till it was abolished in 1926.

The boom created by the war was followed by a period of depression aggravated by competition from Japan. The excise duty

was abolished in 1926, and a special Tariff Board was appointed to enquire into the causes of the depression, and the necessity of protection. The Board found that the difficulties of the industry were largely due to the unfair advantage enjoyed by Japan through double shifts and the employment of women and children at night. The Board was unanimous that the industry had established a claim for protection against imports from Japan, and a majority of the Board proposed an increase in the import duty on cotton piecegoods from 11 to 15 per cent for three years and no increase in the duty on yarn. The majority also recomded a bounty on the spinning of higher counts of yarn. Government rejected the proposal for a bounty and decided to levy a duty of 1½ annas per pound on all imported yarn for a period of three years, extended subsequently to three more years. Inadequacy of this protection was evidenced by increasing imports of piecegoods from Japan in the the years that followed. It was not till 1929 that the Government of India appointed Mr. G. S. Hardy to investigate into the changes that had taken place since 1927. On Mr. Hardy's report, the revenue duty on piecegoods was raised from 11 to 15 per cent in the case of British cotton piecegoods and 20 per cent in the case of foreign goods, with an alternative minimum specific duty in either case of 3½ annas per pound on plain grey goods. For purely revenue reasons, the rate of duties was brought upto 25 per cent and 31¼ per cent on foreign imports.

In 1932, the Tariff Board was again asked to enquire into the question of the grant of substantive protection to the industry. The depression which began in 1929 affected the cultivators who were the principal consumers of cotton goods. This led to deficits in the budget and higer duties as a consequence. The Tariff Board found that the depreciation of the Japanese yen since 1932 had led to a remarkable increase in the imports of piecegoods. They, therefore, recommended that the duty on all piecegoods not of British manufacture be raised from 31¼ to 50 per cent *ad valorem*. By the time the new duty of 50 per cent came into force, the yen depreciated still further and in June 1933 the non-British *ad valorem* duty was raised from 50 to 75 per cent. At the same time, notice was given of Government's intention to abrogate the Indo-Japanese trade convention of 1904.

This was followed by the arrival of an official delegation from Japan and the conclusion of a new agreement by which the duties

were brought down to 50 per cent., with the specific duty of 5½ annas per pound.

The Tariff Board Enquiry of 1932 considered how far the claim of the Indian industry to protection was established—in other words, how far it satisfied the conditions laid lown by the Indian Fiscal Commission. The Board observed that as regards the first condition of the Fiscal Commission's formula, India had a virtual monopoly of short staple cotton, and that absence of long staple cotton was no bar to protection. With regard to mill stores like china clay, magnesium chloride, starch etc., they pointed out that most of these were now being produced in India, as also a large portion of textile machinery and tools. The existence of the cotton industry was of great importance for the development of these subsidiary industries. The domestic market was enormous. As regards labour costs, the Board stated that the lower costs in Japan arose not only from low wages paid there, but also from the double shift system. In regard to the second condition of the Fiscal Commission that the industry is "not likely to develop at all, or is not likely to develop so rapidly as is desirable in the interests of the country," the Board was of opinion that as on the basis of costs, the Indian industry is "unable to meet foreign competition unaided, the second condition is substantially satisfied."[1]

The Board laid stress on the ground that the cotton textile industry represented "important national interests." The industry absorbed 600,00 workers, with twice as many dependants, in addition to between 3 and 10 million people dependent on the handloom industry. An enormous amount of capital was invested in the cotton industry by Indians, and the industry provided an assured market for Indian cotton.

The Board accordingly favoured "substantive" protection to the cotton industry, and stated that the need for protection against the United Kingdom imports was as great as for that against Japan. The Act of 1934 sought to give effect to the recommendations of the Tariff Board in the light of the Indo-Japanese Protocol and the unofficial agreement between Indian and Lancashire millowners, known as the Mody-Lees Pact. The Act fixed the rates of duties on yarn at 5 per cent British and 6¼ per cent non-British yarn. In the case of piecegoods, the duties were fixed at 25 per cent and 50 per cent on British and non-British goods respectively, with a minimum specific duty of 4⅜ annas and 5¼ annas per pound on plain grey goods. The Act guaranteed protection for a

1 Report, p. 116.

period of five years ending March, 1939. It may be stated that, while India incurred a loss of revenue as a result of the preferential treatment accorded to the United Kingdom amounting to a crore of rupees, the gain to the cotton export trade was hardly commensurate. It is difficult to say to what extent any increase in exports of cotton from India to the United Kingdom could be ascribed to the Mody-Lees Pact.

The Mody-Lees Pact was due to expire by the end of 1935, and a special Tariff Board was appointed in September, 1935, to investigate the question of protection to the cotton industry against imports from the United Kingdom. The Board recommended that the duty on British plain grey goods be reduced from 25 per cent *ad valorem* to 20 per cent *ad valorem*, or 3½ annas per pound and that the duty on yarn should remain the same. The Government effected the reductions by a notification and faced the Legislature with a *fait accompli*. This was how fiscal autonomy in India worked in practice!

The Indo-Japanese trade protocol was subsequently renewed for a period of three years ending March, 1940; and a new trade agreement between the Government of India and His Majesty's Government in the United Kingdom replaced the Ottawa Agreement, and provided for a reduction of the basic rates of duties on British piecegoods. According to Dr. Dey, the cotton textile industry expanded production from 1,725 million to 4,013 million yards during 1923-40 and had practically become independent of protection by 1939, though protection was formally withdrawn only in March, 1947.[1]

(c) Sugar Industry

The sugar industry applied for protection in 1930-31. The development of the industry was not only desirable in itself, but it was pleaded that it involved the creation of a commercial crop with a large internal market. The Tariff Board recommended protection on the ground that all the conditions of the triple formula were satisfied. They recommended a duty of Rs. 6-9 per cwt. for a period of 15 years as against a high revenue duty of Rs. 6 per cwt. which was previously levied on sugar imports. The Tariff Board pointed out that the extension of the area under sugar cane is a matter of national importance, that it was desirable, if a crisis in cultivation was to be avoided due to over-production, that steps should be taken to ensure the increase of white sugar to some 4 to 5 hundred thousand tons and, therefore, that the protective duty

1 "Policy of Protection in India—A Retrospect," H. L. Dey, 1950, p. 5.

should not only ensure the continuance of existing factories but the establishment of new ones.[1] It was also pointed out that the cane crop was a source of fodder for cattle and provided continuous employment to both men and cattle as it occupied the intervals between the rabi and kharif harvests. As a result of protection India has become self-sufficient in sugar, and the annual imports which used to average Rs. 15 crores, have now stopped almost completely.

A second Sugar Tariff Board was appointed in 1937, but the report was shelved and published in March, 1939. They stressed the need of permission for the manufacture of power alcohol. The Tariff Board also suggested a marketing survey of the industry and the rationalisation of the industry under some form of State control. The Government in publishing the report, accompanied it with a resolution criticising the findings of the Board and introduced legislation fixing the amount of protection for two years 1939-41 at Rs. 8-12 per cwt. as compared with the previous import duty of Rs. 9-4.

An International Sugar Agreement was signed in 1937 by twenty-one sugar producing countries of the world including India. The Sugar Council determined from time to time the export quotas of the sugar exporting countries in relation to the "free market" of the world. Under the agreement, it was only the "free market" for which export quotas were allotted. The Government of India had signed the agreement on behalf of the Indian industry agreeing that India would not export sugar by sea to any of the free markets except Burma. What was worse, India was treated as a "free market," where any country could sell its sugar upto a maximum of 50,000 tons per year at any price. The Tariff Board observed in connection with this arrangement: "It appears to us somewhat anomalous that India should be debarred from exporting sugar and at the same time be a "free market" for exports when its internal production is already equal to its consumption."[2]

The policy with regard to the sugar industry as with regard to other industries had been a policy of drift. When the Tariff Board recommended in 1939 a protective duty of Rs. 7-4 per cwt. for a period of six years, the Government of India overruled the recommendation and restricted the protective duty to a period of two years ending 1941, which was extended upto the end of March

1 Tariff Board Report, pp. 39-41.
2 Tariff Board Report, 1939, p. 89.

1947. The sugar industry has more than fulfilled the expectations of the Tariff Board by its more or less complete elimination of foreign imports in a period of four years after protection was granted. In 1947 the Tariff Board held a summary enquiry and recommended extension of protection by another two years at the existing rates. In March, 1950, sugar industry was de-protected.

(d) Paper and Paper Pulp Industry

The industry applied for protection in 1924. When the Board inquired into the condition of the industry it was estimated that the full annual capacity was 33,000 tons. The Board observed that out of a total consumption of 100,000 tons the market open to Indian paper would be 50,000 tons in addition to existing consumption. The Board was of the opinion that the Indian market was not large enough to support any great development of the industry.

The Tariff Board excluded newsprint from their proposals, and suggested that the duties which they proposed should apply to paper containing less than 65 per cent mechanised wood pulp. They observed that in the production of printing and writing paper there was a great future for the bamboo paper pulp industry. The Board recommended that a uniform specific duty of one anna per lb. should be imposed on all writing paper and printing paper for 5 years in the first instance. The Board also recommended a loan or guarantee of a public issue of debentures of Rs. 10,00,000 to the Indian Paper Pulp Co. at Naihati. The Government of India rejected the Board's recommendations for the grant of financial assistance, on the ground that this meant singling out one mill for help when there were several competitors in the field. The *laissez faire* policy of the Government stood in the way. The proposals for protective duty were accepted and protection was granted for 7 years instead of 5 years recommended by the Tariff Board.

The Tariff Board examined the case of the industry for further protection in 1931. The manufacture of paper in India had increased from 27,000 tons in 1924-25 to 39,000 in 1930-31, and the share of the Indian mills in the consumption of paper of the protected varieties rose to 71 per cent. The Board observed that increase in the use of foreign pulp and the neglect of bamboo pulp were to be partly attributed to the refusal of Government to encourage the bamboo pulp section with financial help. The Board recommended the imposition of duty of

Rs. 45 per ton on imported wood pulp and the renewal of the specific duty of an anna per lb. on paper, both the duties to remain in force for a period of 7 years. The Government of India accepted the recommendations of the Tariff Board, but held the view that the definition of protected articles, namely, printing and writing paper, should not be left to trade usage. The duties were to remain in force until March, 1939.

The Tariff Board in 1938 supported the claim for the continuation of protection on the grounds (1) that the results had justified protection, (2) that withdrawal of the protection would would be disastrous to new mills, (3) that such withdrawal would prevent the completion of the experimental work on bamboo pulp. The Board recommended a protective duty on imported wool pulp of Rs. 35 per ton or 25 per cent *ad valorem* whichever is higher, and a duty on the protected classes of paper of 11 pies per lb. The period of protection was to be extended for 7 years from April, 1939. The Government of India, while accepting the recommendation for the continuance of protection, viewed the use of grass pulp with misgivings. The grass pulp industry had no claim to protection and they decided to impose an *ad valorem* duty of 25 per cent on imported pulp which would protect bamboo pulp at the lower prices but not grass pulp at the higher. Government, moreover, reduced the protective duty to 9 pies per lb. and fixed the period of protection at 3 instead of 7 years. The Tariff Board in 1947 observed that the industry enjoyed natural advantages with regard to raw materials and had a vast and expanding market to cater for, that the industry was capable of expanding, and had little to fear from any serious competition from abroad, for some time to come. Government, accordingly, decided that no assistance was required by the industry in the shape of protection.

(e) Match Industry

The growth of the match industry in India dates from 1922, when a revenue duty was imposed on imported matches at so high a level (Rs. 1-8 per gross of match boxes equivalent to more than 100 per cent *ad valorem*) that it afforded substantial protection to the home industry. Under the protection afforded by the duty, a number of factories were started, some of which used Indian wood and others wood imported from abroad. Before the war of 1914, the Indian market for matches was supplied by Japan, Sweden and other countries. By 1918-19, imports from Japan into India totalled 10.74 million gross out of the total

import of 11.11 million. In 1923-24, Japan appeared to be losing ground. Imports from Sweden rose to 5.15 million gross, while those from Japan were 5.55 million. During 1924-25, the Swedish Match Co. started its own match factories in India. The case of the industry was referred to the Indian Tariff Board in 1926, on an application by the Indian sector for protection against imports from Sweden and also from the rapidly expanding Swedish Match Company. They recommended a duty of Re. 1-8 per gross boxes; thus in 1928 the revenue duty was converted into an import duty. In 1934, an excise duty was imposed on matches produced in India, and a countervailing import duty ranging from one rupee to Rs. 2 per gross of boxes. The domination of the Indian market by the Swedish Combine meant that Indian producers had to face competition from Sweden both externally as well as internally.

The growth of the match industry in India is the growth of a single manufacturing concern. It was the privilege of this country to institute the protection of an industry which helped not Indian interests but a foreign combine of world wide influence and power! Subsequently, the Western India Match Co. was refloated as an Indian Limited Company with a rupee capital. The capital was, however, largely Swedish and the control entirely Swedish. It now owns 11 factories in India in addition to Indian factories which it controls indirectly. A rate war has been steadily ruining the Indian industry. The undercutting of prices left no margin of profit to Indian manufactures. Match boxes containing 60 sticks were sold at Rs. 2-1 per gross. If the excise duty of Re. 1-8 was deducted, the actual difference would be found to be less than the normal cost of production. The Board estimated the fair selling price in 1928 at Re. 1-4 per gross. In 1948, the total production of the five units of the Western India Match Company was 18 million gross matches a year and the total output of about 200 units run by other companies amounted to 7.8 million gross.

It is significant that the Tariff Board did not recommend stringent measures to prevent the Swedish Trust from repeating its exploits in India as elsewhere. It was alleged that rebates and discounts were offered by the Western India Match Co. to the dealers and vendors of matches, if they undertook not to sell matches manufactured by any other company. The Tariff Board observed: "We have seen advertisements of the Swedish Match Co. which in some cases explicitly, in others by implica-

tion, condemn the products of all Indian match factories without reserve. We must confess that it strikes us as curious that a foreign firm should repay the hospitality offered to it by India by belittling the quality of Indian manufacturers as a class, or indeed that the Swedish Match Co. considered that its interests were best served by methods of advertisement which could not but stir up animosity."[1] As a result of cut-throat competition in India nearly 30 Indian factories have had to close down.

During the last few years, Indian Match manufacturers as well as Indian Chambers of Commerce have persistently urged upon the Commerce Department the desirability of instituting an enquiry into the conditions of the match industry. But the Government of India remained supremely indifferent to the complaint of the Indian match manufacturers.

(f) Heavy Chemicals Industry

Among heavy chemicals are incluled sulphuric acid, hydrochloric acid, nitric acid and a few salts. On account of the heavy freight on acids their manufacture in India was carried on generally with profit. The Tariff Board enquiry in 1929 revealed that no production of chemicals other than these acids was carried on in India. The chemicals referred to the Tariff Board for examination included sulphuric, nitric and hydrochloric acids, magnesium sulphate, ferrous sulphate, potash alum, aluminium sulphate, sodium sulphide, zinc chloride, copper sulphate and Glauber's salt. Most of these are in use in industries including the textile, paper, glass and porcelain, soap and candle industries. The total imports of chemicals and chemical products into India amounted in 1939 to Rs. 10 crores in value.

It was the first world war which saw the beginnings of the Indian chemical industry with the stoppage of foreign imports. The anxieties of Government to develop the chemical industry in India was evidenced during the war period by the effort of the Indian Munitions Board and of the Indian Industrial Commission. After the war the industry had to face the competition of two powerful foreign combines. There were further difficulties due to the rise in exchange from 1924. The claim of the industry for protection was, therefore, particularly strong. It was a key industry, the costs were high, and Indian concerns found it difficult to compete with the foreign combines. The heavy chemicals are the basis of the production of a large variety

1 Report, p. 85.

of commercial products. Without an extensive heavy chemical industry the complete utilisation of our resources was impossible. The Tariff Board recommended that the industry should increase the scale of production so as to reduce the cost per unit. Protection was to be in the form of specific duties amounting to the existing revenue duties. The Board also suggested a reduction in railway freights and recommended a system of bounties for manures on the ground that "the production of artificial fertilisers such as superphosphates and ammonium sulphate has a most important bearing on the development of Indian agriculture." In connection with railway freights, the Board had some interesting observations to offer. They observed: "We are referring to no new feature of railway administration, when we point out that the tendency of the railways to encourage traffic from and to the ports which has been brought under criticism on several occasions is still to be seen. We are informed for instance that the freight on some of the chemicals from Ambernath to the interior was higher than from Bombay to the same places though the distance from the latter was about 45 miles longer. We pointed out this to the Agent of the G.I.P. Railway and he assured us that if his attention had been drawn to this he would have equalised the freights from the two places. But equalisation of the freights does not, in our opinion, meet the objection that the indigenous industry is deprived of its geographical advantage, and the industry is to that extent given a preference. It is essential that consideration of railway finance should be subordinated to the interest of the country as a whole." They further added. "A railway is a public utility concern and its object must be to provide transport at the cheapest possible rate, so that both industries and agriculture may develop and so add to the prosperity of the country."[1]

The Board had recommended a moderate scheme of protection and suggested alternative measures like reduction of Railway freights. Government agreed to grant protection for a period of two years only. It disregarded the suggestion for a bounty on superphosphates and considered freight reductions wrong in principle. When the Act affording protection expired in 1933 the duties were allowed to lapse.

(g) Glass Industry

The glass industry in India appears to have flourished from early days. But the industry in its modern form was organis-

1 Report of the Tariff Board on Heavy Chemicals, 1929, pp. 91 and 97.

ed only during the duration of the first world war. During 1918, it was estimated that there were 20 factories at work. By the time of the Tariff Board enquiry in 1931, 59 factories had sprung up. The Tariff Board considered the case of the industry in the light of the triple formula. As regards the first condition, they stated that Indian sand of the best variety compared favourably with European and American sands, that borax was easily available, that supplies of limestone were also available in India. Difficulties arose only in respect of one important material, namely, soda ash, which is largely used in glass manufacture. The Government of India rejected the claim of the glass industry for protection on the ground that the industry had to rely on foreign imports for its supplies of soda ash and, therefore, failed to satisfy the first condition of the triple formula.

It is true that soda ash in a finished condition was not manufactured in India at the time of the Tariff Board enquiry. But deposits of sodium carbonate and sodium sulphate are to be found in abundance in different parts of the country. Between 1928 and 1934, the Sri Shakti Alkali Works at Dhrangadhra in Kathiawar produced substantial quantities of soda ash. The Tata Chemical Co. also established a factory near Port Okha for the production of alkalis, fertilisers and other by-products. Thus, the soda ash problem arose not from the lack of any basic materials but from the non-existence of the alkali industry. The glass industry was thus made to wait pending the establishment of other industries. It could also be pointed out that the so-called disadvantage of the industry was in respect of a material, which plays a relatively small part in the total cost.

The Indian market is one of the largest in the world so far as glassware is concerned. The total consumption of glassware in India which was nearly Rs. 4 crores in 1929-30 must have increased both owing to the growth of population and commercial and constructional use of glass. Thus, the Tariff Board was right in contending that the first condition of the triple formula in regard to raw material, labour and a large internal market was amply satisfied. The need for protection, however, was the greater in the case of this industry because it was an infant industry, and also because of unfair competition. Accordingly, the Board proposed: (1) a protective duty on sheet and plate glass of Rs. 4 per 100 sq. ft. or 25 per cent *ad valorem*, which-

ever was higher; (2) a duty of 50 per cent *ad valorem* on bangles, beads and false pearls as well as on glass and glassware of other kinds, including bottles, jars, chimneys, shades, plates and other tableware. The Board worked out the incidence of the duties on articles of daily use at 5 annas per dozen tumblers, at half an anna per bottle on aerated water bottles and at half an anna per jar. The Board suggested that the period of protection should be ten years.

The report was presented in March, 1932, but it was not released for publication till June, 1935. It was reported at the time that the Imperial Chemicals were negotiating for a long lease of certain mineral properties from the Punjab Government in this connection. Considerable opposition in the legislature against the grant of concession to a foreign concern resulted in the cessation of these negotiations. By a resolution dated 22nd June, 1935, Government decided to grant refunds of the entire import duty paid on soda ash of British or Colonial origin, and of the excess of over 10 per cent *ad valorem* in the case of non-British ash. This concession was first granted for three years, and subsequently extended to June, 1940 In June 1940, granting a further extension of two years, Government observed, "The production of soda ash on a commercial scale has not yet developed in India but two industrial concerns have made considerable progress with their schemes....In the meantime, the arrangements announced in the resolution of June, 1935, are being continued for a further period of two years, or (if this is earlier) until the Government of India are satisfied that soda ash in commercial quantities is produced in India. The situation will then be further reviewed."

By reducing the duty on soda ash, Government prevented the development of any soda ash industry in India, and thus cut at the root of such development giving a chance to the glass industry to ask for protection again. At the same time, they assisted the British Chemical industry by helping imports of soda ash on a preferential basis. It might well be said that with the turning down by Government of the case for protection of the glass industry, in spite of the recommendation of the Tariff Board, the negation of discriminating protection was reached![1]

Such is the brief history of the working of discriminating protection granted to the principal industries in India. The inade-

1 For a considerable portion of this account of tariff history, we are indebted to the excellent, exhaustive and valuable work, "The Indian Fiscal Policy," 1941, by Prof. B. P. Adarkar.

quacy of the policy, adumbrated by the Fiscal Commission in 1923 has been borne out by this brief review. Moreover, the inclusion of India in the orbit of Imperial Preference, against her will brought about the anomalous position of "protection within preference," which neutralised to some extent the benefits of discriminating protection. An impartial student of Indian economic development like Buchanan has aptly summed up the Fiscal Policy: "The influence of Manchester capitalists is written large in Indian tariff history. They have been as anxious to preserve the Indian market for the benefit of British manufacturers, merchants, bankers, and shippers, as American capitalists have been to preserve the American market for themselves."[1]

Under the policy of discriminating protection during 1929-39 only nine industries were protected; the protective duties were due for revision at various dates during the war, but the period of protection was extended from year to year, until they came up for review in the post-war period.

Post-War Policy

In 1940, the Government of India announced that industries promoted with their direct encouragement as part of war efforts would receive protection in the post-war period against unfair competition from outside India. The industries which got this assurance included bichromates, steel pipes and tubes, aluminium, and starch. In April 1945, Government in a statement of policy invited war time industries which were in urgent need of protection to submit their claims for assistance. These were subsequently referred to a Tariff Board appointed in November, 1945. The conditions of eligibility for protection included a reference to the desirability of the industry in the national interest and likelihood of its becoming self-supporting within a reasonable time. The resolution of April 1945 marked an important departure from the pre-war attitude of *laissez faire*, and provided scope for a liberal interpretation, since the term "national interest" was not confined exclusively to military and defence considerations but meant the economic welfare of the country, diversification of national economy and provision of avenues of industrial employment. The threefold objects of the new policy were (1) to increase the national wealth by the maximum exploitation of the country's resources, (2) to make the country better prepared for defence, and (3) to provide a high and stable level of employment. This policy was reaffirmed by a Resolution of April, 1948: "The

1 Op. cit., p. 465.

dynamic national policy must be directed to the continuous increase in production by all possible means, side by side with measures to secure its equitable distribution." "The tariff policy of Government will be designed to prevent unfair foreign competition, to promote the utilisation of India's resources without imposing unjustifiable burdens on the consumer."

The main function of the Tariff Board appointed in 1945 was to inquire into the claims of war time industries for protection. But under pressure from the Assembly a Resolution of January, 1947, authorised the Board to investigate the claims of pre-war industries for the continuance of protection. The functions of the Board were further enlarged by a Resolution of August, 1948. The Board was to keep a continuous watch over protected industries, advise Government on the necessity or otherwise of modifying protection, and was authorised to exercise certain other functions: (1) to inquire, when required by Government, into the cost of production of commodities produced in the country, and to determine prices and report on the same; (2) to recommend to Government measures necessary for protection of industries from dumping from abroad; (3) to undertake studies on the effects of duties; and (4) to report on combinations, monopolies and other restraints on trade which may tend to affect protected industries. In November 1948, Government issued yet another Resolution stating that, pending the formulation of a long-term tariff policy, claims for protection from important basic industries should be examined by the Tariff Board on the same basis as those of war time industries. Eighteen industries were specified including automobiles and tractors, prime movers, electrical engineering, machine tools, heavy chemicals, cement and sugar, cotton textiles and air and sea transport.

The Tariff Board by August 1947 submitted reports on the claims of 39 industries. It was reconstituted in November, 1947, and by February, 1950, completed 47 enquiries. The list of industries claiming protection included cotton textiles, iron and steel, paper, sugar, aluminium, bicycles, non-ferrous metals, machine tools, and electric motors, soda ash, glass and artificial silk. The Board submitted ninety reports in all, and recommended the grant of protection or continuance of protection in sixty cases. In the remaining thirty cases the Board rejected the claim for protection or continuance of protection. The six pre-war industries in which continuance of protection was not recommended were cotton textile, iron and steel, paper, silver thread and wire, magne-

sium chloride and sugar. These industries, in the opinion of the Board, had already been stabilised or had no serious competition to face.

Most of the recommendations of the Board were accepted by Government, and with the exception of three or four cases, even the specific proposals of the Board regarding the extent, form and period of protection were uniformly accepted.

Fiscal Commission 1949-50

In the meantime in pursuance of their intention of designing the country's long-term tariff policy, as announced in the Resolution of 1948, the Government of India set up in April, 1949, a Fiscal Commission with V. T. Krishnamachari as chairman, to examine the working of the Government of India policy with regard to protection since 1922 and to make recommendations with regard to future policy and the machinery required to implement such policy.

The Commission made its report in 1950. It stated that tariff protection is a means to an end which is to further economic development of the country. The protection of industries should be related to an over-all planning of economic development. Until such a plan has been approved, all defence and strategic industries should be protected on national considerations, whatever the cost. With regard to basic and key industries coming under an approved plan will have to be protected under conditions laid down by the Tariff authority, and reviewed from time to time. With regard to other industries coming under the plan protection will be granted, if (1) having regard to the advantages enjoyed by the industry or available to it and its cost of production, it is likely within a reasonable time to carry on without protection or assistance and/or (2) it is an industry to which it is desirable in the national interest to grant protection, and the probable cost of such protection to the community is not excessive.

With regard to industries not included in approved plans the Tariff authority should examine the claim for protection on the criteria mentioned above. The need for an assurance of protection prior to the actual establishment of an industry is strong in those industries which require heavy capital outlay, or a high degree of specialisation in personnel. In such cases the Tariff authority should be asked to examine the facts and estimates and the nature of foreign competition that the industry is likely to encounter and advise Government as to the protection needed.

As regards the machinery of administration, the Fiscal Commission recommended that a statutory and permanent authority, designated the Tariff Commission should be appointed. It should consist of five members including the Chairman with power to co-opt assessors or advisers. Members of the Commission should be selected for their competence for the functions they will have to perform, coupled with their standing in the profession or business in which they are engaged. They must disclose before their appointment the nature of their interest in private companies, if any, and, on relinquishment of office, should be debarred from holding any responsible position in a private industrial undertaking for a period of three years, except with the prior approval of the Government of India.

Tariff Commission

Accordingly, the Tariff Commission Act of 1952 created a Tariff Commission to consist of not less than three and not more than five whole-time members appointed by the Central Government of whom one is to be nominated as Chairman. Members are to hold office for three years, but are eligible for reappointment. The functions of the Commission are wider than those of the Tariff Board. The Commission can, on reference from Government, inquire into and report on claims for protection, not only from established industries, but also from industries which have not yet started production, but are likely to do so, if granted protection. It can report on any matter relating to prices of particular commodities, whether protected or not. It can report on increase or decrease in customs duties for protecting an industry, action to be taken to deal with dumping, or when an industry is taking undue advantage of protection, increase, decrease or abolish protection already granted to an industry. It can consider the effect of protection granted to an industry on other industries, including cottage or small-scale industries, scale of output, quality of product and prices charged for it. It will be free to decide the duration of protection, according to the requirements of each industry, and not restricted, like the post-war Tariff Board, to recommend protection for a period not exceeding three years. It will have the powers of a civil court for summoning witnesses and compelling production of evidence.

The Commission took over from the previous Indian Tariff Board a number of cases relating to claims for protection—among others, woollen, hosiery and ball bearing industries—also cases relating to review of prices, and 42 cases of continuance of pro-

tection including alloy, tools and special steels, aluminium, artificial silk, cotton textile machinery, dry batteries, hurricane lanterns and motor vehicle batteries.

In 1952-53 amongst the claims referred by Government were grant of protection for the automobile industry, caustic soda and bleaching powder industries, fixation of superphosphate prices, selling prices for rubber tyres and tubes, retention prices of steel produced by Tata Iron and Steel Co. and Indian Iron and Steel Co. for 1953 and revision of cement prices. Most of the recommendations of the Tariff Commission were accepted by the Government of India. Among the important industries recommended for protection was the alloy, tool and special steel industry. The protective duty of 30 per cent *ad valorem* was to be continued and protection was to be continued for a further period of three years ending 31st December, 1954. In case of a revival of foreign competition the rate of protective duty was to be adjusted without delay. Government accepted this recommendation. The Commission also recommended that the protection to the Pencil Industry was to be continued; so also to the starch industry, as the industry provides a basis for a number of other valuable industries, such as penicillin, oils, vitamins, dextrose, glucose, paints and varnishes, plastics and proteins. The protection to the Motor Vehicles Battery Industry was to be continued for a period of three years to the end of December, 1955, and to the Ball Bearings Industry for a period of two years.

International Trade Organisation and India

It is necessary to refer at this place to recent developments in connection with our tariff policy. India has been one of the countries that signed the General Agreement on Tariffs and Trade (GATT) and the Havana Charter for International Trade Organisation. The aim of the GATT is to promote free trade and secure elimination of discriminating treatment in international trade. It provides that the most-favoured-nation-treatment in respect of any privilege or immunity granted by any contracting party to any product of another country shall be given to like products of all the other contracting parties. The Charter and the GATT have not, however, been ratified by any country. The Fiscal Commission recommended that India should ratify if countries like the U.S.A. and the United Kingdom ratified it. In September, 1950 at the third GATT Conference India obtained tariff concessions on her exports to the extent of Rs. 7 crores, in

exchange for concessions to the extent of Rs. 4½ crores. It has been pointed out that the GATT had not done much good to India's export trade, that as a result of tariff concession the percentage share of India's exports to the signatory countries did not increase as compared with earlier years and that other countries do not appear serious about ratifying the charter.

Dilemmas of Protection

The question may also be raised if the protection given to Indian industries, particularly in consumer goods, does not favour the vested interests in industry at the cost of the consumer. Our Government has to face, here again, a dilemma—the attempt to increase industrial production by protection with a view to improve the general standard of life may only result in accentuating the process of exploitation of the masses; on the other hand, a free trade policy may lead to a process of dumping by foreign manufacturers and perpetuate dependence on foreigners without alleviating the condition of our people. What is to be regretted is a complete lack of co-ordination on the part of the Government between its protective policy and import policy as in the case of motor parts manufactures. Such a lack of co-ordination creates uncertainty and prevents private enterprise from launching on industries which promise well for the future. Moreover, whilst big business which is vocal and knows the art of lobbying can secure a hearing and get entrenched in their industrial ventures by protective legislation, the mass of our agricultural population fail to obtain adequate relief by way of subsidies, to live above the fear of semi-starvation, whenever failure of rains or floods detroy their means of subsistence. Grain reserves have no value if in time of scarcity they are made available not as free gifts, but at a price which is beyond the purchasing power of the people employed on public works on starvation allowance. Perhaps no Government, however resourceful, can help, if it is faced with the prospects of a population growth that knows no limits.

Whilst we recognise the soundness of the policy that aims through State assistance and protection at the development of the country's resources and securing for the people the opportunities of an improved standard of life, we cannot end this survey without striking a note of concern at recent trends in the direction of participation of foreign capital on a partnership basis with Indian capital. Speaking on behalf of Government the Finance Member said at the annual General Meeting of the Indian Merchants Chamber on the 8th April 1952: "In the present state of develop-

ment of our country, it is all to the good, in my opinion, to attract as much foreign capital as possble, if this does not involve any conditions injurious to the economic development of the country or its established industries. I think it is a wise policy to allow industries set up by foreign capital to flourish without impediments." Speaking in Parliament again on the 3rd July, 1952, the Finance Minister said: "If other countries have surpluses of capital, we shall be glad to use them on our own terms. . . . I cannot see what an underdeveloped country can do when its own resources are limited without such assistance. . . . . If once we decide that we shall receive foreign assistance, whether it is State assistance or a loan from the International Bank, or private equity capital, then we should create conditions in which the flow of that assistance will continue."

The terms and conditions on which participation of foreign capital and enterprise were to be regulated, without detriment to the country's self-respect and dignity were laid down in the Government of India Resolution of April, 1948. They were to provide that the major interest and ownership in effective control were to be in Indian hands, and the training of suitable Indian personnel was to be insisted on. In the years that followed the exceptions to the rule that major interest in ownership and effective control were to be vested in Indians have been as frequent as the rule itself. This was implied in a statement made by Pandit Nehru in the Constituent Assembly on 6th April, 1949. The statement was intended to clear up doubts in the minds of foreign capitalists about the policy of the Government of India. As regards existing foreign investments "Government do not intend to place any restrictions or impose any conditions which are not applicable to similar Indian enterprise." "Foreign interests would be permitted to earn profits. We do not foresee any difficulty in continuing the existing facilities for remittance of profits, and Government have no intention to place any restrictions on withdrawal of foreign capital investments. . . . If any foreign concerns come to be compulsorily acquired Government would provide reasonable facilities for the remittance of proceeds." "If and when foreign enterprises are compulsorily acquired, compensation will be paid on a fair and equitable basis."

Whatever may said about the necessity of inviting foreign capital into Indian enterprise and industries, the undertaking that there will be no discrimination as between Indian and non-Indian

enterprises once established in our country frustrates to a large extent the purpose of protection as a means of developing our resources with a view to improving the standard of living. So long as and to the extent that the profits arising from the investment of foreign capital go abroad, the result deprives the country of increased production and savings that would result from the employment of indigenous capital and enterprise. The country's resources may be developed and yet the channels of irrigation which savings imply may lose the supply of water through diversion to the extent of the profits remitted abroad. The Government of India under the Five Year Plan would appear to have guaranteed the maintenance of the present field of private enterprise; they have declared their inability to increase direct taxation beyond the present limits. In other words, the present standards of living of the rich are to be protected. In view of their avowed policy of non-discrimination between Indian and foreign capital in the sphere of protected industries, and the guarantees given to foreign investors for facilities of remittance of profits abroad, they may be rendering more remote the chances of improving the standard of life of the masses by the closer association of foreign vested interests with those of our own country in the continuance of a pattern of economy that is marked by wide divergences in the distribution of income.

CHAPTER XXVI

INDUSTRIAL FINANCE

It has beeen only during the last sixty years that industrial enterprise has developed in India. In the first half of the 19th Century British capital in the Bengal Presidency and a few Indian merchants in Bombay started pioneer industries. Regular development of Indian industrial ventures commenced in the early years of the present century, stimulated by the Swadeshi movement. Industries require block capital for land, buildings, and machinery and for extensions. They also require working capital for purchase of raw materials, stores, for the marketing of products and for meeting day to day requirements. We may speak of this twofold demand on the part of industries as the demand for long-term credit and short-term credit.

To illustrate, in the paper industry a concern with an output of 10,000, tons with four machines was estimated to require Rs. 80 lakhs as fixed capital and Rs. 16 lakhs as working capital in the

pre-war period; while a cotton textile factory with 100,000 spindles and 2,000 looms required a fixed capital of one crore and a working capital of a crore and a half. With the great rise in prices, the amount required today would be about 3 times. At pre-war prices, the cost of setting up a textile mill 25,000 spindles and 600 looms was estimated at Rs. 21½ lakh by the Ahmedabad millowners. In 1948 the estimate was Rs. 87 lakhs.

Sources of Supply of Fixed Capital in India

Most of the industries in India have made up their fixed capital expenditure through public or private subscription by way of shares or debentures.

A share represents the acquisition of a fraction of the ownership in an enerprise and entitles the shareholder to a share in the profits earned by the company and also in its surplus assets if the company is dissolved. A debenture represents the title of the investor to a certain amount of money lent by him. It is a loan earning a fixed interest. On dissolution of a company, the debenture holder has a first claim on the company's assets. Usually he has no voting rights as the shareholder has, because he takes no risks. Preference shares have been issued in some cases. The jute mills have relied more on the latter source of financing. It appears that 52 out of 59 jute mills in 1938-39 had issued preference shares.

Debentures

Debentures in India have not played a large part in industrial finance, as appears from the following table :—[1]

	Joint Stock Companies in Calcutta list	Joint Stock Companies in Bombay list
Share capital (in crores of rupees) ..	76.37	52.83
Debentures " " " ..	8.65	17.51

The relatively small part played by debenture capital in India may be due to a variety of causes. The managing Governor of the Imperial Bank in his evidence before the Central Banking Enquiry Committee stated that debentures were not popular in India because investors were interested in capital appreciation and speculation rather than in steady but low yield. This is scarcely borne out by facts. Enormous amounts have been invested by the Indian public in Government securities, postal cash certificates and municipal loans, where the prospect of appreciation is not very large. The reasons for the unpopularity of debentures are to

1 Indian Central Banking Enquiry Committee Report, Vol. I, p. 335.

be sought elsewhere: (1) In the first place, there is no organisation in the shape of financing agency for the issue of debentures. The Imperial Bank of India was debarred from holding debentures as security, till the bar was removed by the Amending Act of 1934. (2) As there is no ready market for debentures, joint-stock banks do not take to them; they are usually taken up by a limited group of financiers. (3) Industrial companies which had issued debentures have not been looked upon with favour by banks, and such concerns find it difficult to secure bank loans on the usual terms.[1] Debentures being a first charge on the property of a concern, a company which has raised some part of its capital by debentures fails to get further accommodation from banks.

The difficulties of raising large sums by debentures are very great. (1) Small concerns cannot issue debentures which will be taken up by the public. (2) In the case of manufacturing concerns, the companies must have worked for some time with profit before they can make debentures attractive to the public. (3) The debentures that have been issued have been raised on costly terms. (4) The small size of the volume of debentures precludes the growth of a market for their issues. (5) The attitude of the banks, which are reluctant to accept as collateral securities the shares of companies that have issued debentures, is also a factor which handicaps the development of debenture issues. (6) The Government of India has been a rival in the Indian market which has affected industry unfavourably.

The percentage of debentures to paid up capital, and of preferred to ordinary shares, in the case of joint-stock companies cannot be ascertained as the figures are not available. In the case of tea industry for which detailed figures are available, the following table illustrates recent trends in the proportion of ordinary and preferred shares and debentures :—

Year		Preference shares	Ordinary shares	Debentures
1925	..	25,20,000	2,58,36,000	8,29,000
1926	..	25,20,000	2,59,48,150	6,30,000
1927	..	25,20,000	2,65,58,150	6,00,000
1928	..	25,20,000	2,61 08,150	5,65,500
1929	..	25,20,000	2,57,48,150	4,63,500
1930	..	25,20,000	2,56,48,150	4,63,500

The amount of preference shares has remained constant, while debentures have declined relatively to total capital.[2] The

1 Discussions with Foreign Experts, Indian Central Banking Enquiry Committee, Vol. IV, p. 163.

2 Basu, "Industrial Finance in India," 1953, pp. 105-7.

relative smallness of the proportion of debentures to share capital has relieved industries in India from the depressing influences upon profits that was characteristic of Western industries during the slump period. The Indian Central Banking Enquiry Committee estimated that in 1927 out of 100 units of capital 75 per cent were ordinary shares, 16 per cent preference shares and only 9 per cent debentures in India. On the other hand, in British industry proportions were 47 for ordinary shares, 33 for preference shares and ·20 for debentures. As Basu observes, "The proceedings of the Indian Central Banking Enquiry Committee proved beyond the shadow of doubt that industrial concerns which had issued debentures were not looked upon favourably by the Banks."

In recent years, debentures have been issued not to obtain necessary funds for the working of the companies, but because they are required by the managing agents themselves for their own adventures. Thus Dalmia Cement, Ltd. raised funds by the issue of debentures in 1946 for financing investments of their managing agency Dalmia Jain and Co., Ltd., who purchased Benett Coleman and Co., Shapoorji Bharucha and Madhavji Dharamsi Mills at highly inflated prices.[1] Further, due to stagnation in the capital market, even big and well-established business houses have had to resort to debentures at rather high rates of interest in order to raise more capital.

It would thus appear that the main reason why debentures play such an insignificant part in industrial development in India is to be found in the attitude of the banks. A change in this position in the future will be determined by a more sympathetic attitude on the part of the banks and by their readiness to popularise and facilitate a method of raising capital which has already proved so successful in other countries of the world.

Sources of Supply of Working Capital in India

Working capital in India has been obtained in different ways by different industries. Generally speaking there are 4 sources of supply: (1) public deposits, (2) private deposits, (3) advances by indigenous shroffs, and (4) advances by joint-stock banks.

(1) Public Deposits

The system of attracting public deposits is peculiar to the Bombay and Ahmedabad Cotton Textile factories. It does not

1 Memorandum of Bombay Shareholders' Association, 1949, p. 43.

prevail in other parts of the country. The development was largely due to the imperfect banking organisation. The following table illustrates the importance of public deposits in the Bombay and Ahmedabad cotton mills :—[1]

	Bombay (Figures for 64 mills)		Ahmedabad (Figures for 56 mills)	
	Lakhs of rupees	Percentage of total finance	Lakhs of rupees	Percentage of total finance
Amount loaned by the managing agents[2]	532	21	264	24
Amount loaned by banks	226	9	42	4
Amount of public deposits	273	11	426	39
Amount of share capital	1,214	49	340	32
Amount of debentures issued	238	10	8	1

People trusted their savings to men whom they knew and with whom they could deal without the formalities necessary in dealing with banks. The millowners, on the other hand, secured to the depositors a safe return on their investments. The rates of interest paid on these deposits have varied from 4½ to 6½ per cent. This system has enabled the mills to borrow at cheap rates and to pay higher dividends to the shareholders. On the other hand, this method of borrowing has its drawbacks. There is a temptation of overtrading with unsecured loans, and even of speculation in cotton. There is also the risk that short-term funds may be locked in the extension of plant and machinery. Lastly, sudden withdrawal of deposits by panic-stricken investors may precipitate a crisis. But the cotton mills have benefitted by such public deposits. It was pointed out by the Chairman of the Ahmedabad Millowners' Association that 95 to 98 per cent of the finance employed by the cotton mills of Ahmedabad consisted of fixed yearly deposits so that if a mill is in difficulties it gets a notice of 6 to 8 months in advance to arrange for its finance. In Ahmedabad, a system of long period deposits ranging from 5 to 7 years, and also of "inter-deposits," that is, deposits as between one mill and another, has increasingly come into vogue.

(2) Private Deposits

In almost all new industries in India, a method of finding working capital from private deposits provided by the industrialists, their friends and the managing agents, is becoming increas-

1 Indian Central Banking Enquiry Committee Report. Vol. I, Part I, p. 278.

2 The Interim Report of the Bombay Textile Labour Enquiry Committee pointed out that in 56 mills in Bombay, in 1936, the amount loaned by managing agents was Rs. 7.5 crores, and in Ahmedabad in 73 mills the loans amounted to Rs. 3.3 crores. The deposits by the public in Bombay were Rs. 1.3 crores and in Ahmedabad Rs. 5.3 crores. (Report, p. 53).

ingly prevalent. Thus , as the table mentioned above shows, the managing agents provided 796 lakhs of capital, as against 699 lakhs provided by public deposits. These loans are usually given at half per cent above the bank rate and they have been instrumental in saving from liquidation many of the cotton mills in Bombay and Ahmedabad, as well as tea companies in Bengal and Assam. These private deposits are free from the risk of sudden withdrawal. They provide for new industries capital which would otherwise not be easily available, and are helpful in times of temporary difficulty and depression. On the other hand, with industry dependent on financial assistance by private deposits, there is a likelihood of shaking public confidence in industrial ventures.

(3) Indigenous Shroffs

The indigenous bankers or shroffs once played a large part in Indian economic life. Today, though the old and established industries like cotton and jute are independent of these shroffs, small concerns have to go to them to avoid the formalities of advances from regular banks. The shroff lends on a personal bond and on personal knowledge charging a high rate of interest, without requiring a deposit of securities or a friend's countersignature on the promissory note. The importance of these shroffs is gradually waning due to the development of joint-stock banking.

(4) Joint-Stock Banks

The Indian banking system consists of the Reserve Bank, the Imperial Bank, the Joint-Stock banks and the Exchange banks. The Reserve Bank as a Central Bank and the Imperial Bank of India cannot make any advance for a period longer than six months, nor can they lend upon mortgage or security of any immovable property. The exchange banks have no relation to industrial finance. The other joint-stock banks are essential commercial banks and can give loans for short period and against certain forms of security only. The usual form of borrowing is the cash credit account against personal credit with a second signature to the pro-note or advance against tangible and marketable securities. Short-term credit in India is marked by rigidity and costliness. In the evidence before the Central Banking Enquiry Committee it was repeatedly asserted by industrialists that the rates of interest charged were generally higher than the industries could bear. The larger joint-stock banks make advances at one per cent higher than the bank rate. Banks, moreover, insist

on maintaining a margin of about 30 per cent in regard to advances against stocks. They finance industries by granting advances for short periods. But though they are always willing to renew these loans, the industrial concerns can never be certain of getting a renewal.

Managing Agents

The managing agency system, which is a unique feature of industrial organisation in India, arose during the second half of the last century; and this system of organisation and management was gradually extended to almost all concerns, both Indian as well as British. Modern industry in India owed its development to two classes of people, British merchants who had come out to represent British trading firms and the cotton merchants of Bombay, Ahmedabad, and other centres. Enterprises were promoted and controlled by persons popularly known as managing agents. The rise of the managing agents was due to the fact that they were pioneer promotors in many of the industries like the jute mills, the tea gardens and the coal companies. They were also instrumental in supplying a regular stream of trained and efficient managers. They found opportunities for nourishing the growth of new enterprises and, as banks were not prepared to finance the long-term needs of industries, they provided the necessary finances.

The managing agency firms may be described as partnerships or private limited companies, formed by a group of individuals with strong financial resources and considerable business enterprise. But a significant development in recent years has been the conversion of the partnership managing agency into joint-stock companies with limited liability. Practically all the old British managing agency firms have been converted into limited liability companies. Among these are such well-known houses as Messrs. Andrew Yule & Co., Mackinon Mackenzie, and Gillanders Arbuthnot & Co.[1] Another significant feature is the partnership between Indian and British capitalists. The high incidence of taxation on partnerships as against joint-stock corporations and the buying up of their assets by Indian capitalists with their huge profits of the war period at high prices, may be included among the causes of these recent developments.

The managing agency firms do the pioneering work of research which precedes the starting of new concerns, promote joint-stock companies, employ their own funds and arrange for

1 *Capital*, Annual Number, 1949.

finance by acting as guarantors and manage the business. They, moreover, act as agents for marketing the produce of their companies and for purchase of raw material, store and machinery. Thus, the early cotton mills were established in Bombay by the enterprise of a few wealthy Parsi merchants.

The financial assistance rendered by managing agents is either in the form of direct loans or in the form of guarantees for advances by joint-stock banks. It is also the credit of the managing agents that ensures a steady flow of public and private deposits. In the Ahmedabad cotton mills, the proportion of the share capital held by the managing agents is generally 40 to 50 per cent. In Bombay, it is considerably higher. In Calcutta and Madras, the managing agency firms do a large amount of banking business in addition to other activities. The firm of Messrs. Andrew Yule & Co. in Calcutta, one of the important managing agency firms, have hardly ever borrowed from any joint-stock bank. They have a separate banking department of their own for financing the industrial companies which they manage. In Bombay, the managing agency firms are mainly Indian. In Calcutta they are mainly European.

Not only do the managing agents subscribe themselves to the shares and debentures of the companies they manage, but they assist in the placing of their securities on the market, performing the function which in the West is undertaken by underwriters or industrial banks.

If the question is asked why industry in India has been dependent on managing agents for its finance, the reasons are not far to seek. Firstly, capital in India has been shy. Secondly, there are no issuing houses helping in the floatation of new concerns and taking up the risks in the initial stages. Nor are there any industrial banks. Thirdly, the financing of industry from early days has been dependent upon the private managing agency firms.

Managing Agency System of Finance

The managing agents have in the past performed essential services. Apart from their being pioneers in the floating of industries they have been instrumental in preventing the collapse of industrial concerns in times of depression. In the jute and cotton industries, many more concerns would have gone into liquidation but for the capacity of the agents to bear the losses themselves. With a crudely developed system of

commercial banking, the managing agents alone were able to continue financing industries like the jute and tea industries at a time when banks were unwilling to lock up their funds.

But whilst acknowledging the services of the system, it is necessary also to point out some of its characteristic weaknesses in the matter of finance. An important defect of the Indian managing agency system as compared to the British managing agency system is the former's hereditary character. The British managing agency always takes in as partners experienced hands from outside, while the Indian managing agency system is usually hereditary and this results many a time in inefficient management.[1]

(1) To refer to these weaknesses, in the first place, industry in India tends to be dominated by financial considerations. "Finance, instead of being the servant of industry, has become its master."[2] The result of the system has been to hand over the management to a body of individuals, not because they are by their ability qualified to be the directing heads, but because they have the financial resources to help the industry. When agencies are transferred from one group to another, it is the same financial considerations that prevail. Industrial ability never enters into the matter. The failure and liquidation of a number of cotton mills in Bombay may be largely due to the lack of industrial ability and enterprise on the part of frequently changing managing agency groups.

(2) Where one managing agency firm manages a large number of concerns, the difficulties of some concerns have re-acted unfavourably on all; and the sound and unsound concerns suffer equally. The concentration of management of several mills in the hands of a few agency firms strains the financial resources of the agents, whose abilities to finance may be limited to a few concerns.

(3) It has often happened that a concern otherwise perfectly sound has suffered on account of the unsoundness of the financial position of the managing agents. They often carry on subsidiary activities which land them into difficulties. Banks

1 Cf: "The new-fangled managing agents have no knowledge of manufacture-engineering, technical or scientific. They have no expert knowledge of purchase nor of sales. Purchase agents are appointed at the cost of the company and sales are entrusted to ignorant wholesale agents who again are paid by the company. The various irregularities committed in filing balance-sheets, lists of shareholders, extraordinary resolutions with the Registrars of Joint Stock Companies are an illuminating commentary on their knowledge of commercial law and training in secretarial work." Basu, op. cit. pp. 169-70.

2 P. S. Lokanathan, "Industrial Organisation in India," 1935, pp. 225 *et seq.*

withdraw their credit, not because the concern is unsound, but because of the financial weakness of the managing agent. It also happens that the transfer of funds from a more successful to a weaker concern, both managed by the same agent, reduces the profits to the shareholders of the successful concerns and shakes the confidence of the investors. It has also been said that the dependence on the managing agency system of finance has the effect of taking away from the banks the responsibility for a more careful scrutiny of the financial and economic conditions of the concern.

(4) What may be regarded as a more serious weakness of the system, at least as it works in Bombay, is the enormous speculation in cotton mill shares. Any weakness in the financial position of the managing agents of one concern leads a rival group of shareholders in the same concern to get managing control by cornering shares so as to obtain a major holding. Many of the "corners" in the Bombay Stock Exchange "have been the result of the inter-dependence between the managing agents' external activities and their functions as financial agents of the companies they manage."[1]

It has been pointed out by a banking expert how the managing agency system reacts unfavourably on joint-stock banking and creates a vicious circle. "The banks are spoiled by the managing agency system and the managing agents are spoiled by the banks because the banks force the joint-stock companies practically to take managing agents. The banks are quite happy that companies are managed by managing agents, as it gives the banks their signatures for the loans." "The banker is thus not interested in developing other methods of financing industry; he has two signatures, and he has no reason why he should favour another system which may be quite good for industry, but deprives the banker of another signature."[2] It has been pointed out that nowadays banks do not require the guarantee of the managing agents on overdrafts.

On the other hand, it has been pointed out that the managing agents discharge a useful function as intermediaries between the company and the investing public. This function corresponds to that of the Industrial Banks of Germany in the investment field. When a new company is floated, the public may

1 *Ibid.*, p. 228.

2 Indian Central Banking Enquiry Committee,—Dr. Jiedels' Evidence, Vol. IV, p. 244.

subscribe only 20 per cent of the capital and 80 per cent may be left in the hands of the managing agents. The agents by working the company for a number of years inspire confidence in the public and the shares are generally disposed of.

In the Ahmedabad Cotton Mill Industry, the managing agents have supplied the initial fixed capital by subscribing the share capital. In his evidence before the Tariff Board of 1932, Mr. Kasturbhai Lalbhai representing the Ahmedabad Millowners' Association, stated that in several cases managing agents held three-fifths of the shares in the cotton mills, and that there were individual cases of managing agents holding even 85 to 90 per cent shares.[1] As regards Bombay, the evidence before the Tariff Boards of 1927 and 1932 suggests that the managing agents were the majority shareholders. Only in the Bengal cotton mills, the managing agents have not the same stake unlike in Bombay and Ahmedabad. Still they hold a fair amount of shares. e.g., in the Bengal Laxmi Mills, the managing agents hold 25 per cent of shares and in the Mahaluxmi Mills 10 per cent of the shares. The Basanti Mills are an exception where managing agents with their relatives and friends hold nearly 80 per cent of the share capital.[2] As regards the European managing agents in Calcutta jute mills, the general tendency is not to hold the shares permanently, but to dispose of them to the general public as quickly as possible. In more recent times the position, however. has changed. Thus, in the case of the cotton mills in Bombay as was pointed out in oral evidence of the Bombay Shareholders' Association before the Indian Tariff Board in 1932, in one cotton mill the managing agents held only 83 out of 6,000 shares. In the Bradbury Mills the managing agents held 624 shares out of a total of 4,000 ordinary and 6,000 preference shares.[3] But, "there have been a few cases in which these agents have turned their loans into debentures, with the result that the concerns have passed into their hands and the shareholders have lost all their capital invested in the undertaking."[4] They have in the past frequently furnished long-term loans, and have taken up debentures in large amounts for financing schemes

1 Indian Tariff Board, Cotton Industry, 1932, Vol. IV, p. 139.

2 Basu, op. cit. pp. 149-50.

3 Even where the managing agents do not hold a majority of shares, their influence dominates shareholders' meetings, and it is rare to find a private shareholder's resolution passed at an annual general meeting. "The managing agents of the Auckland Jute Co. Ltd., held 20 per cent and of the Anglo-India Jute Mills Ltd., 25 per cent of the share capital respectively in 1948 and 1949. (See Basu, op. cit. foot note, 155.).

4 Central Banking Enquiry Committee Report, Vol. I, p. 279.

of extension. During periods of depression when banks would not advance money they have rendered considerable assistance. They have provided working funds for the industry by attracting deposits from the public. Their financial standing has been mostly instrumental in drawing such funds. They have arranged by their guarantee for all bank loans and overdrafts required by the industrial concerns under their management. They have created a feeling of trust and confidence in the investing public.[1]

Apart from providing finance, the managing agents perform two other functions. They pioneer and promote new industries and secondly carry on the day-to-day management of industries, a function which in other countries is discharged by a manager or a managing director.

Managing Agents as Pioneers and Promoters

In the past, managing agents have been largely instrumental in organising a number of industrial enterprises in India. The history of some of the managing agents like Andrew Yule and Co., Martin and Co. and Killick Nixon and Co. shows how men who came out as representatives of trading companies utilised their experience in the advancement of industrial concerns. They engaged the services of experts for technical purposes and developed jute mills, flour mills, coal companies and railway companies. They brought into existence industries which did not exist before. More recently, however, so far as pioneering and promoting activities are concerned, they have fallen into the background. This has happened partly because with growing industrialisation the scope of pioneering work is getting restricted, but more because with the growth of industries there is growing up a separate class of entrepreneurs who do the work of promotion themselves. This is particularly noticeable in new industries like sugar, cement, paper and chemicals. Thus in the sugar industry out of 145 sugar mills working in India in 1933-34, no less than 71 were not under the control of any managing agency firm. In the cement industry in which about a dozen concerns are principally at work, nearly half are not managed by any firm of managing agents. In the match industry except half a dozen large companies, the smaller establishments are run on a proprietary basis and have nothing to do with any manag-

1 This was challenged by Mr. Manu Subedar in his minority report of the Indian Central Banking Enquiry Committee. He observed, "The managing agency system tends not to encourage but to check the flow of capital in industry. The managing agents take advantage of a rise of prices to boom their shares and unload them at top level, leaving the public to hold the baby. In this they not only play with loaded dice, but they discourage the *bona fide* investor and give to industrial investments a bad name." Vol. I, Part II, p. 331.

ing agency firm.[1] But the new class of entrepreneurs have only recently occupied the industrial fields in India. They confine themselves to new industries as in the older industries like cotton and jute, the managing agents are far too strongly entrenched.

Managing Agency Agreements

A managing agency agreement is a written agreement between a firm of managing agents and an industrial concern (usually a joint-stock company) by which the agents undertake to manage the concern in return for a certain remuneration and for some commission on sale, output or profits. The agreements are either terminable, the period being 20 to 40 years, or non-terminable as in Ahmedabad. These agreements sometimes tended to be very arbitrary. Thus the Ajit Mills, Ltd., Ahmedabad, started in 1931, appointed agents who were non-changeable non-removable and permanent secretaries, treasurers and agents.[2]

A good deal of criticism has recently been levelled at the remuneration of managing agents:—

(1) Remuneration in the first place takes the form of office allowance. In Bombay and Ahmedabad, a fixed monthly or annual amount of money is given for head office expenses to managing agents. In so far as this amount covers the actual expenses incurred by the managing agents in the administration of the companies under their charge, no one can object to such payment. It has been, however, alleged that the amounts such firms charge is excessive. Looking to the account submitted to the second Textile Tariff Board by the Bombay Millowners' Association it appears that the office allowances during the years 1927-30 averaged about Rs. 7,000 per annum per mill. In the jute industry, office allowances are charged by managing agents at the rate of Rs. 500 to 1,000 per annum per mill. The small amout of office allowance in Calcutta is due to the more economical organisation of the European managing agents and also to the fact that in Calcutta a single firm usually controls 15 to 20 concerns. Though the Tariff Board (1932 Cotton Industry), opined that office allowance was to be permitted to the managing agents as a reimbursement for the out of pocket expenditure incurred by them and not as additional profit, a number of companies floated during the war have provided for office allowance as a form of extra remuneration. Even those managing

1 See N. Das, "Industrial Enterprise in India," 1938, pp. 58-59.
2 *Ibid.*, p. 62.

agents who were not getting any office allowance formerly have arranged to amend the managing agency agreement to provide for its payment.

(2) Secondly, the payment consists of commission with a stipulated minimum, which must be paid whether the companies make profit or not. This has to be paid by all companies under managing agency control. The commission is calculated on production, or sale or profit. When the cotton industry was first established in Bombay the managing agents received a commission based on the output of yarn. When ring spindles were introduced, production increased, and agents were able to make profits even if the mills produced at a loss. After 1886 the system of payment of commission on profits was introduced, and the practice was generally accepted. Of 71 mills in 1928 in Bombay, only one mill paid commission on production and 61 paid on profit, 8 mills paid commission on sale and one mill paid a fixed remuneration to the managing director. In other centres of the cotton industry, the common method is that of a commission on output. It is usually provided that in case of losses, a portion of the commission is to be relinquished by the managing agents.[1] Now, commissions in Bombay are paid on profits, being limited mostly to 10 per cent of the profits with a minimum allowance payable per annum. In Ahmedabad, commission is based on sales, while in Sholapur it is based on deliveries. There is an additional office allowance payable in Bombay but none either in Ahmedabad or Sholapur, with the exception of one concern at the latter centre.[2]

In the jute industry, a majority of the mills still pay commission on sales. In the tea industry the usual terms are, a minimum amount when a garden is laid out, and a commission of 2½ per cent on sales and 2½ per cent on profits. In the coal industry, 10 per cent on profits is the usual return to managing agents. Due to exemption of companies incorporated before January 15th, 1937, under the Companies Act of 1936, regarding remuneration on sales, some managing agents, like the Hukumchand Mills, Ltd., Alembic Works Co., Ltd. and Alembic Glass Industries Ltd. got remuneration both on profits and sales.[3]

The Tata Iron and Steel Co. adopted in 1916 a new method of remuneration, by which the managing agents shared in a slowly rising degree in the prosperity of the company.

1 Indian Tariff Board—Cotton Industry, Vol. III, 1927, p. 323.
2 Interim Report of the Bombay Textile Labour Inquiry Committee, 1938, p. 55.
3 Memorandum of Shareholders' Association, 1949, p. 128.

Of the three systems the last one seems to be the best. There can be no doubt that a system of commission on production is open to the grave objection that it does away with the incentive to dispose of production at the best price. The same objection applies to the system of commission on sales. Unless the managing agents hold the majority of shares, they are only interested in selling their production, without reference to the price at which it is sold. There is a further weakness associated with commission on production or sales, as such a system creates a conflict of interests as between managing agents and the shareholders. The managing agents are primarily interested in output, without caring for the effects of excessive output on the profit making capacity of the industry.

There was another evil associated with the system of paying a percentage to the managing agents on production. It led to the manufacture of coarse goods and to overstocking regardless of market conditions. Thus, as Mr. Enthoven pointed out, "It is not alone the shortness of the local staple which has kept manufacturers from experimenting in goods of the finer class. A strong inducement to adhere to the coarser goods can no doubt be traced in the financial arrangements of the majority of the mills whereby the agents are paid a fixed sum per pound of outturn. Coarse goods are produced far more rapidly than the finer counts and cloths, a fact of which the signification has by no means escaped the Agents' understanding."[1]

The question has been asked, apart from office allowances, are the remunerations paid to managing agents fair or excessive? It is difficult to generalise in view of the widely divergent conditions that prevail from industry to industry.

On behalf of the managing agents, it was urged before the Tariff Board Enquiry in 1932 that they often made substantial sacrifices in the matter of commissions.

The Bombay Millowners' Association gave the following figures covering 74 mills regarding the sacrifices made by managing agents during 1926-31:—[2]

		Rs.
1.	Amount of commission given up by Managing Agents ..	28,68,718
2.	Amount of interest on loans given up by Managing Agents ..	31,20,526
3.	Amount of loans advanced by Managing Agents and converted into capital	1,75,92,950
4.	Losses incurred by Managing Agents through guaranteeing loans to mills from banks	69,49,228
5.	Other financial sacrifices made by Managing Agents	44,628

1 R. E. Enthoven, "Cotton Fabrics of the Bombay Presidency," 1897, pp. 36-37.
2 Tariff Board Enquiry, 1932, Vol. I of Evidence, p. 95.

It may be pointed out that the last four items are financial transactions. Even in the case of commissions said to have been given up, the Bombay Millowners' Association could not supply particulars when challenged by the Bombay Shareholders' Association. The sacrifice of commission amounted to only Rs. 6,300 roughly per mill during the period of 1926-31. This figure can be compared to the allowances and commissions drawn during the same period in the industry:—[1]

Year	Number of mills represented	Total allowances and commissions drawn Rs.
1927	75	3,087,477
1928	73	11,832,225
1929	76	2,026,173
1930	71	1,345,444

These figures give us an average of Rs. 28,107 per mill per annum, that is, nearly five times the alleged sacrifices. The Bombay Shareholders' Association mentioned cases in which managing agents received commissions although the mills made losses.

The figures supplied by the Bombay Textile Labour Enquiry Committee Report show that during the years 1934 to 1938 the total amount of commission given up in Bombay was Rs. 20 lakhs, that is an average of Rs. 4 lakhs per year, and in Ahmedabad, Rs. 96 lakhs, that is, Rs. 19.2 lakhs per year on average. The amount of commission, on the other hand, charged (excluding office allowance),[2] was Rs. 8 lakhs, that is, an average of Rs. 13.6 lakhs per year, and Rs. 149 lakhs, that is, an average of Rs. 29.8 lakhs per year in Bombay and Ahmedabad respectively. The amount of profits calculated, before providing for depreciation, and deducting the agents' commission, was Rs. 494 lakhs in Bombay and Rs. 548 lakhs in Ahmedabad during the same period. The report observes that "even taking into account the commission figures, payments are on a higher scale in Ahmedabad than in any other centre."[3] The average yearly commission charged for 1933-34 to 1936-37 in C.P. and Berar (5 mills) was Rs. 23,319, and the yearly average commission given up during the same period was Rs. 8,728. The commission works out at three times that given up[4]

1 Lokanathan, op. cit. p. 345.

2 "Office allowance is to be a recovery of the out of pocket expenditure on behalf of the Company by the Managing Agents" (Act of 1936); but in actual practice they get much more.

3 Report, pp. 225 *et seq.*

4 Based on figures given in Table XI in the Report of the Textile Labour Enquiry Committee, C. P. and Berar, 1938.

The following table is of great interest in this connection:—[1]

Place	Annual Commission actually charged				Net Profit or Loss as per Profits and Loss Account			
	1933	1934	1935	1936	1933	1934	1935	1936
	(Rupees in Lakhs)							
Bombay	6	11	8	10	—18	43	21	40
Ahmedabad	24	29	28	25	27	32	21	13
Sholapur	—	1.5	1.0	2.6	—	5.8	1.0	0.5

Are the figures of commission excessive? The representatives of the Millowners' Association urged before the Tariff Board that managing agents manage as well as finance, and therefore the industry should be prepared to pay on a more liberal scale to them than to managing directors, who only manage. But (1) their financial services are amply covered by the interest they earn, and (2) any liberal allowances they get in the early stages for pioneering work should be scaled down as the industry becomes well-established. (3) The managing agents calculate their commission on gross profits before depreciation is set aside. Interest on loans, profits by way of premium on shares sold, profit on sales, are not excluded from gross profits. Thus in 1921, the Simplex Mills earned a premium of over Rs. 10 lakhs on the issue of additional capital and the managing agents charged commission on this. In 1916, the Tata Power Co. sold in the open market certain shares which had previously been forfeited, and earned a large amount of premium on the sale of these shares. The managing agents charged commission on the premium thus earned.[2] (4) If the business of a company is transferred during the term of the agreement to another party, the managing agent can claim the right of continuing in office, or compensation in the alternative, equivalent to the commission earned by him during the preceding five years. In Calcutta the agreements do not contain a provision for compensation. Such a practice of compensation amounts to putting a premium on inefficiency or dishonesty, as winding up proceedings or transfers of management take place as a result of mismanagement or inefficiency, and sometimes on the initiative of the managing agent himself. (5) There are a few instances in which managing agency agreements contain a clause for supplementary or secret profits or a stipulation that no member of the managing agents firm shall be debarred from holding an office of profit under the company.

1 Bombay Textile Labour Enquiry Committee Report, p. 55.

2 Memorandum of the Bombay Shareholders' Association on the Indian Companies Act Amendment Bill, 1936.

The following table showing the distribution of profits between managing agents and shareholders in the period 1940-47 tells its own tale:—[1]

Industry	No. of companies	% share of profits to m. agents	% share of profits to shareholders
Cotton Mills in Bombay ..	39	38.8	46.27
Cotton Mills in Ahmelabad	22	70.5	31
Jute Mills	16	36.9	79
	14	54.2	73.20

In Bombay and Ahmedabad, the managing agency agreements include a clause providing that the managing agent may assign to a third party his interests or duties, without the sanction of the directors. The Tariff Board in 1932 came across an instance in which an important agency firm had an agreement, by which the agreement itself could be transferred to a third party. In Ahmedabad, it is usual to provide a clause in the agreement by which the commission earned could be divided between several persons who have helped in the promotion of the company in the early stages.

Taking all the factors into consideration, it would not be unreasonable to say that the commission paid to agents is excessive. It is said that commission paid to managing agents must be assessed in relation to the services performed, and should not be considered big if the system obtains good results. There is no doubt that in Ahmedabad there is a high level of financial and administrative efficiency, but to suggest that lower rates of commission would impair efficiency is not quite correct. Efficiency in management can be secured, even though payment is on a salary basis, as in a number of countries. As the Bombay Textile Labour Enquiry Committee observes: "It will be a reflection on Indian employers as a class to suggest that, in order to induce them to exert themselves to their highest capacity, remuneration has to be offered to them on a basis which is generally recognised as unsound."[2] The system of office allowance in addition to the commission is invariably found in agreements, especially in

1 "Who Owns India," Asoka Mehta, 1950. p. 46.

2 Report p. 257. The actual remuneration at present varies between 10 and 25 per cent. To check excessive remuneration, the Company Law Cofmittee (1952) recommended that it should not exceed 12½ per cent of net profits per annum with a minimum of Rs. 50,000. There have been concerns however, like the Kirlosker Brothers, Ltd., where the managing agents are entitled to one third share of profits in event of declaration of dividend of 9 per cent. Thus in three years 1945-48 their average remuneration amounted to Rs. 1,80,000 per year whereas the shareholders' dividend during the same period was 1,70,000 per year. The managing agents received more than what the shareholders received. What is still more objectionable is the practice of paying the Directors, in addition to their sitting fees, a lump sum or commission on profits, though the day to day management is vested in the managing agents. (Memorandun of Shareholders Association, pp. 129 *et seq.*)

Bombay; and it is permitted by law. This office allowance is inclusive of the office salaries and other expenses, as distinguished from the salaries and expenses of the officers in the mill premises. In Bombay, the office allowances are considerable. When all the actual expenses in salaries, rent and contingencies, are met by the company, and a reasonable minimum commission is paid irrespective of profits or bonus, such a practice of paying extra official allowance is unjustified.[1]

Managing Agents, Directors and Shareholders

The agreements between managing agents and the companies vest all residual powers (those not mentioned in the agreement) in the board of directors. Recent agreements, however, are so worded that even the residual powers are exercised by the managing agents alone. The choice of directors by the shareholders is limited by the practice which assigns to the managing agents the power of nominating a number of irremovable directors, who constitute a majority on the board. The shareholders are further deprived of their voting strength by the issue of deferred shares with multiple voting rights largely controlled by the agents. The disproportionate division of voting power, whatever the means used to achieve it, reduces the bonafide investor's assurance that he will be given a fair deal.[2] The first directors of a company are usually appointed for a fixed period of ten to fifteen years; directors are made to retire by rotation; and a new nominee has to be approved by the board. The removal of a director by the shareholders can only be effected by a special resolution at a general meeting with a three-fourths majority.

There is a tendency, under these conditions, for the shareholders to become suspicious and critical of the directors and managing agents. This critical attitude was voiced by the Shareholders' Associations of Bombay and Calcutta, who contended for a more effective control over the policy and for fuller opportunities of knowledge of the company's position. It was also pointed out that in India there was a tendency for the directors to hold their position in far too many concerns, and the "pluralism" in directorship results in indifference and inability to perform their proper functions. Thus in the cotton mills of Bombay, one person was director in 30 mill companies in 1927. In the evidence before the Tariff Board in 1932, it was brought

1 Report, p. 258.
2 *The Economist*, quoted in Memorandum of the Bombay Shareholders' Association, p. 99.

out that a single director worked on 65 concerns, another on 42 and a third on 34. The practice is not confined to India, as in England for instance an enquiry into the number of directorships revealed that 13 were directors of 40 or more companies, 27 of 30 to 39 companies, and 112 of 20 to 29 companies. In Canada, less than 50 persons hold 769 directorship.[1] Finally, a board of directors in India may be said to have no definite function to perform. If they show excessive enthusiasm, they are dropped by the managing agents. As Mr. J. A. Wadia pointed out in his evidence before the Tariff Board Enquiry in 1927, "The majority of the directors hardly take much interest in the concerns. If they are a bit active, they go."

Future of Managing Agency System

In recent years about 50 industrial concerns involving crores of rupees of assets have changed hands at fabulous prices as a result of direct transactions in sale and purchase of large blocks of shares together with the management rights. Such trafficking in management rights on a large scale has left the shareholders at the mercy of the new managing agents, most of whom have utilised the companies' funds and reserves for their personal benefit. Thus, the predominant holdings of the managing agents have proved to be a curse rather than a blessing. Other abuses brought to light of late are unwarranted restrictions on the directors' powers of management, converting the boards into packed bodies, systematic exploitation of companies and their shareholders for the personal benefit of the managing agents, who get themselves appointed, or get their allied units appointed as buying and selling agents, brokers, mukadams, etc. One may also mention the misuse of funds in a variety of ways and by insertion of unwarranted terms in agreements.[2]

The ECAFE Report on Mobilisation of Domestic Capital ascribes the deterioration in the system in recent years to the entry into the field of new and inexperienced managing agents who bought management rights during the war, and suggests correcting rather than destroying the system, on the ground that it provides to some extent the industrial leadership needed actually for economic development.[3]

The Fiscal Commission, 1949-50, impliedly favour mending

1 Asoka Mehta, op. cit. p. 45.
2 For details see Memorandum of Shareholders' Association, 1949.
3 Op. cit., p. 132.

rather than ending the managing agency system.[1] The Planning Commission favour the acceptance of the recommendations of the Company Law Committee.[2] The Committee observe: "Having regard to all the circumstances, we consider that under the present economic structure of the country it would be an advantage to continue to rely on the Managing Agency system."[3] They feel that shorn of the abuses and malpractices which have disfigured its working in the recent past, the system may yet prove to be a potent instrument for tapping the springs of private enterprise. They accordingly recommend the tightening up of relevant provisions of the Indian Companies Act with a view to minimise the opportunities for malpractices.[4] The changes contemplated refer to (1) the appointment of managing agents, (2) the conditions of their service, (3) their remuneration, (4) their powers *vis a vis* directors, and (5) their activities in regard to borrowings, contracts, sales and purchases made on behalf of the managed company. According to Prof. K. T. Shah, "The system is rotten, root and branch, leaf and bark and blossom, and must be abolished at the first opportunity."[5]

One may conclude that, taking the system as a whole, it is more a hindrance than a help to the development of industries, and that it is far from desirable that industries should be dependent on it. Granted the continuance of private enterprise, a more rational method of obtaining industrial finance would seem to be in the organisation of industrial banks, or in their absence in the establishment of more direct relations between industry and commercial banks.[6]

Concentration of Control

From the very beginning of the rise of the managing agency system, there has been a trend towards the concentration of control of a number of concerns under one managing agency firm. The following table illustrates the extent of concentration between 1911-51.[7]

1 Report, pp. 202 and 217.

2 First Five Year Plan, p. 443.

3 Report, 1952, p. 84.

4 *Ibid*, p. 85.

5 "Industrial Finance," National Planning Committee, 1948, p. 55.

6 See later sections in this chapter.

7 M. M. Mehta "Recent Trends in the Managerial, Administrative and Financial Integration of Industrial Enterprises in India," *Indian Economic Review*, February, 1954. According to a table supplied by Asoka Mehta, in 1949, Andrew Yule & Co. controlled a total of 78 companies, Bird & Co 31, McLeod & Co, 55, and Octavian Steel Co, 51. op. cit., p. 29.

Trends in Managerial Integration of Industrial Units in Selected Indian Industries 1911-51

Frequency Distribution of Industrial Units

Name of Managing Agents	1911 Jute	1911 Coal	1911 Tea	1911 Cotton	1911 Miscellaneous	1911 Total	1931 Jute	1931 Coal	1931 Tea	1931 Cotton	1931 Miscellaneous	1931 Total	1951 Jute	1951 Coal	1951 Tea	1951 Cotton	1951 Miscellaneous	1951 Total
Andrew Yule ..	5	12	8	—	7	32	10	12	16	—	12	50	10	10	17	—	13	50
Mcleod	3	5	2	—	1	11	5	—	6	—	7	18	11	—	18	—	11	40
Martin	—	4	—	—	7	11	—	7	—	—	20	27	—	—	—	—	26	26
Bird	8	12	—	—	—	20	8	3	—	—	4	15	7	4	—	—	10	21
Duncan	—	—	13	—	—	13	1	—	22	—	—	23	1	—	25	—	—	26
Gillanders Arbuthnot	1	—	1	—	2	4	2	3	3	—	9	17	2	1	7	—	10	20
Williamson, Mager	—	1	10	—	—	11	—	1	14	—	—	15	—	1	13	—	1	15
Indian Managing Agents																		
Tata	—	—	—	4	2	6	—	—	—	4	8	12	—	—	—	4	20	24
Birla	—	—	—	—	—	—	1	—	—	2	—	3	1	—	1	7	17	26
Dalmia	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	35	38

The tendency to concentration of control is common to both European and Indian managing agencies and is strengthened during the last twenty years. This concentration of administrative control of a number of concerns under a single management secures co-ordination of activities, economies in the matter of sales and purchases, of supervision and day-to-day administration. Administrative integration has been called a feature of the managing agency system at its best. Without a formal combination, and without losing their separate functional existence, the various units are enabled to realise some of the economies of the large-scale organisation. The system ensures, it is also claimed, some of the economies of vertical expansion. "In so far as a jute mill, a coal company, a tea garden and a boat company are all under one common management, the products of one concern find market in the business of the others."[1]

On the other hand, it has been pointed out that better results are likely to be achieved by economies resulting from close personal attention than from concentration of management. The latter requires for its successful working either a very high level of organising ability or an equally high level of reliability and intelligence among the rank and file. In the absence of these conditions, large-scale management leads to waste and irregularities. When administered with business capacity and with a sense of loyalty to the general interests of all concerned in the business, centralised control may be beneficial. But there have been concerns not only poorly managed but definitely mismanaged. A

1 Loknathan, op. cit. p. 288.

centralised control affords in such cases greater opportunities for juggling with accounts and orders, unfair purchases of raw materials, crooked dealings in shares, and the subjugation in a variety of ways of some one company's interest to another.[1]

Inter-Investment of Funds

The managing agency system has not eliminated competition except as between the units under the same management. Indian industry has not given rise so far to combinations of the monopolistic type. But on the other hand, the concentration of management has led to a practice of inter-investment of funds, a practice particularly prevalent in the cotton textile industry in Bombay and Ahmedabad. Deposits received by mill companies at bank rate are loaned to allied concerns at the market rate, and the difference is pocketed by the management. Funds borrowed in advance for extensions are employed in allied concerns or in the managing agents' own business. The surplus funds of one concern are invested permanently in allied concerns under the same agency. In 1922, the Nagpur, Swadeshi and Ahmedabad Advance Mills purchased the debentures issued by the Tata Mills under the same agency to the extent of Rs. 60 lakhs out of a total issue of Rs. 1,00,00,000. The balance sheet of Sir Shapurji Bharucha Mills in 1924 showed an advance of Rs. 4,35,353 to the Indian Woollen Mills under the same agents.[2] The several transactions of loans and advances as between Sir Shapurji Bharucha Mills and Madhowji Dharamsi Manufacturing Co., and other companies in 1946-47 were "nothing but interlocking, interlinking and inter-financing transactions of a highly questionable character involving several companies in the Dalmia Jain Group, and window-dressing methods were employed.[3]

The practice of inter-investments may bring about a co-ordination of credit under a unified organisation. But the practice may be harmful to the interests of the shareholders of a company which has surplus funds. Assistance has been given to weak companies which would not have otherwise survived and whose closing down would have been advisable in the larger interest of society. The abuses connected with the inter-investment policy

1 See Buchanan, p. 165 *et seq.*

2 "Borrowings have been made for illegitimate purposes; loans and advances of a non-trading nature have been given to friends and nominees; interlocking dealings and transactions in the form of advances and investments have been entered into in allied concerns, and assets of financially sound concerns have been mortgaged, and debentures issued, not because the concerns themselves were in need of funds, but because their managing agents wanted funds for their own purposes or in furtherance of their own plans." (Memorandum of shareholders' Association, 1949, p. 41).

3 *Ibid.*, p. 21.

have had serious results on the investing public, on whose confidence depends the future industrial development of the country. A further abuse of the managing agency system is associated with the practice of managing agents taking big loans from the companies they manage. The Bombay Shareholders' Association gave a statement to the Tariff Board in which they quoted instances of this kind. The Balance Sheet for 1931 of the Standard Mills of Bombay under the agency of Messrs. Mafatlal Gagalbhai and Sons showed that a sum of Rs. 3,32,000 was lying with the agents. The balance sheet for 1930 at the Shorrock Spinning, Weaving and Manufacturing Co. under the agency of Mafatlal Chandulal & Co. showed that a sum amounting to Rs. 16,17,000 had been lent to the managing agents. The statutory report of Kamani Engineering Corporation Limited for 1945 showed that a sum of Rs. 7,27,675 remained due from managing agents Messrs. Kamani Bros. Ltd. in respect of arrears of call money.[1] To check severe abuses of interlocking, the Bombay Shareholders' Association wrote to the Govenment in March 1949 to issue an ordinance. Such practices might well shake the confidence of investors in industrial concerns.

Indian Companies Act, 1936

As the result of agitation carried on by the Shareholders' Association, the Indian Companies Act was amended in 1936. Under the Amended Act, no managing agent can be appointed to hold office for more than 20 years at a time; and even in the case of existing agencies the period of office must come to an end after 20 years. It is also provided that a company may remove a managing agent if he is convicted of certain criminal offences. The appointment, dismissal, and variations in terms of appointment of managing agents are made dependent upon the approval of shareholders. The remuneration of the managing agent is limited by the Act to a percentage of the net profits, subject to a minimum remuneration with an office allowance. The method for calculating the net profits is laid down in detail. Under the Act no company under a managing agent can make any loan to, or guarantee any loan, made to any other company by the same managing agent. Similarly, no company can employ its funds in the purchase of shares and debentures of another company under the management of the same managing agents. Finally, no managing agent can nominate more than one-third of the total number of directors.

1 For details of interlocking transactions see Part III of Memorandum of Shareholders Assocation op. cit.

The Act provides that every company shall have at least three directors, two-thirds of the total number being elected by the shareholders. The granting of loans to directors is prohibited, and no director can hold office of profit except with the consent of shareholders.

As regards shareholders, the new Act lays down that the prospectus must contain all matters which would enable a prospective shareholder to form an honest judgment. The articles of association must contain the names and addresses of the managing agents and their remuneration. Where property has to be purchased by a company, the prices at which the property might have been transferred during the two years preceding the acquisition of the property must be disclosed. If a new business is to be acquired, there must be a report of a qualified accountant as to the profits made in the business during the three preceding years. Lastly, the company must render a profit and loss account, and a report of the auditors on the documents audited by them. Details of the remuneration actually paid to directors and the managing agents are to be made available to the shareholders.

The amended Act of 1936 was not, however, comprehensive enough to meet with the abuses associated with the promotion of companies and the working of the managing agency system. A Company Law Committee was appointed in October, 1950, to review the entire situation and its recommendations are now under consideration by the Government of India. In anticipation of the findings of the committee, the Indian Companies (Amendment) Act, 1951, was passed to "restrict trafficking in managing agency rights and cornering of shares in the open market with a view to acquiring control over the management of well-established and reputable companies for anti-social purposes."

The Company Law Committee's report with a view to removing some of the abuses in company management which it found prevalent makes comprehensive recommendations concerning the issue of prospectuses, the nature of the capital and voting rights of shareholders, the selection and powers of directors, and extension of present provisions of the Act relating to disclosure of directors' interests. With regard to the managing agency system the Committee conclude that notwithstanding the abuses and malpractices which have disfigured the working of the system it would be desirable to continue to rely upon it, as it "may yet prove to be a potent instrument for tapping the springs of private enterprise." The Committee recommend that important powers,

like the power to issue debentures, to lend and borrow should be reserved to the directors of the principal company and not delegated to managing agents. All existing managing agency agreements should expire at the latest on 15th August 1959. Managing agents should not be appointed for a period longer than 15 years, subject to renewals for a period of 10 years. Further, the Committee recommend that managing agency commission should be restricted to 12½ per cent of the net profits, and that commisssion should not be paid to managing agencies on purchases made on behalf of a company and managing agents should not be permitted to participate, save within defined limits, in business similar to and directly competing with the business of the managed company.

It has been said that no amount of legislation can make management more efficient or honest than it is, nor can it make shareholders more active and intelligent. Nevertheless, there are signs that shareholders are awakening to the need of protecting their own interests, as evidenced by the activities of Shareholders' Associations in Bombay and Calcutta. Though a majority of shareholders can never be expected to take an intelligent interest in the affairs of the company, there will always be a few who would be enabled under the Act to get the necessary information and act on behalf of the general body of shareholders.

Investments and Savings

All capital is the result of saving. With modern developed forms of banking organisation, whatever the individual does not immediately consume becomes a saving on the strength of which banks can create larger volumes of capital and credit. The development of banking is determined by the growth of the investment habit, which in turn depends on the earning capacity of the people, their will to save, and the facilities for investment. In India, none of these factors is adequately developed. In the past, the finance that India required for block capital and working capital was provided by the managing agency system. The banks which were purely commercial institutions did not and could not help industries to any large extent.

When we consider generally the financial resources of India which can be utilised for industrial development, we have, in the first place, to take account of such indeterminate items as the resources of the money-lenders and indigenous bankers and private hoards. It has been suggested that these indigenous shroffs and bankers command large amounts of money which, if properly

mobilised and tapped, would help industries. At present, their activities are not co-ordinated and no attempt on a large scale has been made to establish contacts of a systematic character between them and the joint-stock banks. The number of money-lenders has been estimated at between 300,000 and 350,000. The local bankers and shroffs mainly provide finance in the urban areas to traders and small industrialists and through their relationships with commercial banks they obtain a limited amount of credit accommodation. They, however, do not find it convenient to accept the conditions laid down by the Reserve Bank for direct relationship, namely, either to give up their non-banking activities or to present separate accounts of banking and non-banking business for inspection.

It has been estimated in Great Britain that the annual savings in 1929 were £ 500,000,000, that is, about 12 to 15 per cent of the national income. No such estimates are available for India. Dr. Jeidels, in his discussions with the Central Banking Enquiry Committee, suggested a figure of Rs. 700 crores as the total capital invested in Government and semi-public securities, in industrial and joint-stock companies including deposits with banks, but excluding the bulk of foreign capital functioning in the country. When we remember that this amount had to meet the needs of short-term and long-term agricultural credit as well as of commerce, we can well understand how little would be left over for the needs of industrial finance. Moreover, there has been a tendency for the public to invest their savings in real property. Government, moreover, is a constant borrower, attracting a large number of investors who prefer the security of such loans to industrial investments.

With regard to the amount of hoards that are in existence, so far as the agricultural population is concerned, with their phenomenal poverty and their heavy indebtedness, it is unlikely that they save to any large extent. With regard to the remaining 30 per cent of the population, saving is limited by the investment facilties offered by Government in the shape of Post Office Savings Banks, National Savings Certificates and Government Promissory Notes. The absorption of gold which marked the twenty-five years before 1930 was followed by huge exports from year to year after 1930, draining from the country what may legitimately be regarded as the accumulated capital resources built up in earlier decades. Dr. Muranjan places the pre-war savings at Rs. 75 crores per year.[1] It is estimated that in later years about

1 Economics of Post-War India, 1945, p. 45.

Rs. 50 crores are annually invested in gold, silver and jewellery.[1] The net investment in National Savings Certificates was about Rs. 18 crores in 1951-52. Net receipts in small savings amounted to Rs. 42 during 1952. According to Mr. Parekh private and State Provident Funds would be Rs. 15 crores a year and savings through life assurance would be Rs. 34 crores.[2] Personal savings in the form of investment in land and property is estimated by him at Rs. 50 crores, gold ornaments at another Rs. 50 crores and corporate savings of organised industries at Rs. 30 crores a year.[3] The ECAFE Report on Mobilisation of Domestic Capital estimates annual savings at Rs. 350—400 crores.[4]

The Planning Commission observe in this connection that little information is available on the rate of investment in India in the last few decades. Rough estimates suggest that the resources devoted to net capital formation probably amount to about 5 per cent of the national income. With a population growing at the rate of 1¼ per cent per annum, this rate of 5 per cent savings is just sufficient for maintaining *per capita* incomes constant.[5]

How far can industry depend upon the joint-stock banks for the supply of its needs? A poor country like India has very little surplus in the shape of annual savings. The commercial classes and the salaried and professional section of the middle classes may have the will to save; but their capacity is limited. There are no rules of retirement, there is no scheme of insurance, and the social demands on individual savings not only in the shape of ceremonies and charities, but in the shape of maintaining dependants under the joint family organisation, leave very little in the shape of savings for these classes. It has been estimated that the rate of real savings in India is less than 6 per cent per annum. Population increases by one to one and a half per cent every year whilst industrial and agricultural production lags behind, despite the progress involved in the Five Year Plan. There has likewise been an alleged shift of income from urban to rural areas and possibly from the upper income levels to urban workers. All these factors have probably brought down the extent of savings to five or four per cent, or not more than Rs. 350 to 400 crores.

1 H. T. Parekh, "The Bombay Money Market," 1953, p. 114.

2 Premium income of Indian Life Insurance Companies was Rs. 12 crores in 1941, Rs. 24 crores in 1945, Rs. 30 crores in 1948 and Rs. 34 crores in 1950. Insurance Companies, it may be noted, are required under law to invest 55 per cent of their assets in Government and Approved Securities.

3 Ibid, pp. 112-16.

4 Op. cit., p. 123. Also see section on Capital Formation in the chapter on Foreign Capital.

5 If the Planning Commission's estimate is an over estimate, there is nothing to be surprised at if the economic condition of the mass of the population shows signs of growing deterioration.

It has also to be remembered that despite development in recent years banking facilities are still very limited. One has to face a vicious circle in this connection. Banking institutions cannot grow in the absence of banking habits. On the other hand, the growth of banking habits is determined by banking facilities. Moreover, there has been no intimate relationship between industry and banking in India. Banking development in India on Western lines came a little later than industrial development through the managing agency firms. Thus industry had to adopt its own methods of financing, without reference to the banking structure. When banking institutions on Western lines were introduced into India, they developed on lines already familiar in England. They were commercial banks without any reference to the needs of industry. When joint-stock banking developed in the middle of the 19th century in England, the needs of industry were already provided by the financial mechanism. There were enormous reserves of capital for the supply of industrial needs. Methods of finance which were familiar in England as well as methods of commercial banking were, therefore, brought to India in the belief that institutions suited to Great Britain were equally suited to Indian conditions.

The number of scheduled commercial banks has now increased to 95. Their investments are mainly in government securities, and it has been estimated that 50 per cent of their loans and advances are for trade and finance and 30 per cent for industry. The financial requirements of medium and small scale borrowers and industries are very inadequately met by the scheduled banks. Whatever advances these banks make for industry are confined to larger enterprises.

In England, moreover, as well as in U.S.A. insurance companies are suppliers of industrial finance. The distribution of insurance companies investments in England shows that between a quarter and a third of their funds are in the form of shares of industrial enterprises and securities of railway companies. In India, on the other hand, insurance companies have invested their funds in Government or semi-Government securities. Under the provisions of the Insurance Act, the insurance companies are compelled to invest 55 per cent of their liabilities in Government and Government approved securities. In 1947, insurance companies invested Rs. 19.3 crores in the shares of companies, that is, only 11.5 per cent of their total assets.

Stock Exchanges

Stock exchanges have to some extent encouraged investment habits by providing liquidity for securities. There are two stock exchanges in Bombay, two in Calcutta, and one each in Ahmedabad, Delhi, Madras, Kanpur and some other places. "In 1947 there were 128 companies with a paid-up capital of about 1,000 million rupees, which had securities listed on more than one exchange, while securities listed on one exchange only aggregated about 1000. The aggregate face value of the securities listed by the stock exchanges is Rs. 2,700 million or about 60 per cent of the total paid-up capital of Rs. 4,400 million of all joint-stock companies in India. Securities of the central and provincial governments aggregating in value to about Rs. 14,000 million as well as the securities of port trusts and municipalities of an aggregate value of about Rs. 600 million are also dealt on those exchanges."[1]

There has been in recent times excessive speculative activity resulting in severe fluctuations in shares and stocks prices. These have not been conducive to healthy investment. A Committee was asked to report on the working of the stock exchanges in India, and subsequently a bill has been circulated for regulation of stock exchanges on a uniform all-India basis.[2]

The stock exchanges, however, do not touch the large number of persons who have small savings, except indirectly. The bigger shareholders all come from cities like Bombay and Calcutta. The bulk of the investments come from the rich merchants and the prosperous professional classes. The banks are mostly unwilling to advise their clients about suitable investments. In recent times, however, a few banks and brokers' firms perform this function. The public generally prefer Government securities and the small investor postal cash certificates.

Investment Trusts

It has been suggested that an Investment Trust Company on the lines of the British or American institutions may help industrial finance. The investment trust raises capital from the public by selling stock to them, which is then put in a number of investments. Such a trust takes away the responsibility of investments from the hands of the public and supplies industry with funds. It is pointed out, however, that such companies confine their deal-

1 "International Monetary Fund," Quoted in ECAFE Report on "Mobilisation of Domestic Capital," op. cit. p. 134.

2 For a brief critical account of the working of the Bombay Stock Exchange, see Parekh, op. cit. chapter VI.

ings to established securities, and their primary aim is not industrial. They are, therefore, inadequate in a country like India which is more or less in the early stages of its industrial development. What is needed in India is an organisation which will make it one of its objects to foster the growth of new industries and afford financial advice.

In recent years a few private and public trusts have been established to finance new industries, e.g. Tata's Investment Corporation of India, Industrial Investment Trust Ltd., Birds' Investments Ltd., Oriental Investment, Dena Trust, J. K. Investment Trust Ltd., etc. Some of these are specifically interested in the business and industries in which their managing agents are interested, whereas others are trusts only in name, and are floated to undertake any business enterprise that may be considered profitable. Some of them have been run on sound lines and cater for small investors who seek security and safety. But trusts like these cannot serve the purpose of industrial banks, and cannot, therefore, be a proper agency of long-term finance to industries.

Industrial Banks

Since the days of the Indian Industrial Commission, the view has been generally expressed that the difficulties of industrial finance in India can be met by the establishment of an industrial bank. "We consider that the establishment of industrial banks," observed the Industrial Commission, "working on approved lines is of sufficient national importance to justify Government assistance." It has been pointed out that an institution created by Government would be lacking in that industrial spirit and practical experience which are necessary for success. Industrial banks require a staff who are in daily touch with the business world, and who know the conditions of each industry, and a body of experts who can judge new schemes and offer advice. What is required in India is an institution which will inspire confidence in the investing public as to the soundness of the concerns to which it is asked to subscribe. The Tata Industrial Bank which was started in 1917 with an authorised capital of Rs. 12 crores was an enterprise which, if it had proved successful, would have been followed by a number of similar concerns. But it suffered because it was established in a year of boom, and committed the blunder of becoming more or less the promoter and financier of concerns associated with one firm of managing agents.[1]

1 Lokanathan, op. cit., pp. 256-59.

Industrial Finance Corporation

With a view to providing industrial capital to industries which may not be able to secure finance from the capital market the Government of India set up an Industrial Finance Corporation in July 1948. The Central Government and the Reserve Bank of India each subscribed a crore of rupees, the rest of the capital being subscribed by the scheduled banks, insurance companies, co-operative banks and investment trusts. A minimum dividend on the investment (2¼ per cent) and repayment of capital are guaranteed by the Central Government. The Corporation is authorised to borrow upto five times its paid-up share capital and reserve fund. Management of the Corporation is entrusted to a board of twelve directors, four nominated by Government, two by the Reserve Bank and the rest elected by other shareholders.

The Corporation provides finance to public limited companies and co-operative societies engaged in the manufacture of goods, or in mining and power companies. Individuals and private limited companies are excluded. The Corporation can grant loans or advances or subscribe to debentures repayable within 25 years secured by mortgage of assets, underwrite the issue of shares, stocks or debentures by industrial concerns, and guarantee loans repayable within a period not exceeding 25 years. It is prohibited from subscribing directly to the shares or stocks of companies; limitations, also, are imposed on the amount of loans or advances to any single concern. This amount is not to be more than 10 per cent of the share capital of the Corporation or 50 lakhs of Rupees whichever is less.

During the four years ending January, 1952, loans amounting to Rs. 14 crores to 94 applicants were sanctioned by the Corporation. About 1½ crores were not paid as the applicants refused the loan. The rate of interest charged by the Corporation was 5½ to 6 per cent in 1952. The amount of loans outstanding at the end of June, 1952 was Rs. 7.25 crores. During the year ending June 1952, out of 54 applications amounting to Rs. 7.3 crores 33 were sanctioned loans upto Rs. 4.45 crores, 19 were rejected, 17 were under consideration and 3 were withdrawn. Industries that received help included machinery, chemicals, cement, electric concerns and textiles which were established in the last ten years. The help given by the Corporation may be regarded as timely in view of the stagnation in the capital market since 1948. But the Corporation has failed to help the promotion of new companies and limited its activities to underwriting issues of share capital. Under the

amended Act of 1951 the loan to a single concern is not to exceed Rs. 1 crore and the period of loan is limited to 20 years. With a view to help small-scale industries, Madras, Saurashtra and Bombay have set up Finance Corporations of a similar type.

The working of the Finance Corporation has recently evoked criticism resulting in the appointment of a Committee presided over by Mrs. Kirpalani. While the Government-sponsored Corporation has been stated to suffer from red tape methods involving undue delay, and from charges of corruption and nepotism, an effort has just been started for the formation of an Industrial Development Corporation under private enterprise, but with the support of the International Monetary Fund and with the help of funds supplied by American businessmen.

In recent years there has been stagnation in the capital market which is attributed to the relative decline in prosperity of the classes who were the normal supporters of the market. It has been observed that with the integration of the Princely States or measures taken or initiated in some of the States for the abolition of Zamindaris, the Indian rulers and zamindars have not been active in the investment market, and owing to the high rates of income tax and super tax, and the steep rise in the cost of living during the post-war years, the traditional investors —the big businessmen and the upper middle class professional men have had no substantial savings for investment.[1] The question of industrial investment and the encouragement of the process of financing new developments by the ploughing back of profits has, therefore, assumed considerable importance. Insurance companies and individual investors who have been severely affected by the heavy fall in prices of industrial shares since the peak period of 1946 have not unnaturally shown a preference for debentures and other fixed interest bearing investments. Consequently even established business houses of standing have been obliged to raise new capital by the issue of debentures at comparatively high rate of interest. Amongst the factors that have contributed to this stagnation in the capital market may be included political uncertainty, the vacillating industrial policy of Government voiced through too many *ad hoc* pronouncements of too many spokesmen, the relatively high level of taxation on personal income and

1 We are afraid this view fails to take account of the large amounts made by lawful or unlawful methods of profiteering which went into blackmarket transactions and which the Reserve Bank itself had to take into account when it undertook careful enquiries on the presentation of high denomination notes after their cancellation by the Act of the Central Legislature. The Income-tax Investigation Commission reports are also revealing in this connection.

property and the greed for quick returns on the part of many a businessman.[1]

CHAPTER XXVII

FOREIGN CAPITAL

The problem of foreign capital investment in our country has been a long standing issue; but it has acquired a new importance in the post-war period in view of the projects of all round economic development contemplated by the First Five Year Plan. It has been generally recognised that the economic growth of underdeveloped countries has been retarded by the absence of capital resources and the low rate of capital formation.[2] "The so-called underdeveloped areas as compared with the advanced are underequipped with capital in relation to their population and natural resources."[3] The Planning Commission observe: "India has a programme of development larger than can be financed from the resources internally available. . . . . . There will still remain certain shortages which would tend to restrain the whole pace of development, and it is in meeting these that external resources will be of help."[4] "In securing rapid industrial development under present conditions, foreign capital has an important part to play."[5] The U. N. O. Report on "Mobilisation of Domestic Capital in certain countries of Asia and Far East" says: "External finance is necessary not only to increase the rate of development, but to act as a stimulant to domestic savings.[6]

Employment of Foreign Capital in India

We have already noticed how industrial development in the last century was retarded by lack of indigenous capital and how the early British trading firms were responsible as promoters and pioneers of industry. The period of industrial development in the West coincided with the establishment of British rule in India. This

1 Due to the shortfall in the target for capital investment in the private sector as suggested by the Planning Commission a Committee was appointed under the chairmanship of A. D. Shroff to report on the question.

2 "India, as far as can be ascertained, saves some 6 to 7 per cent of the national income which is a high figure for a poor country. But any higher rate of saving than that is going to necessitate a severe reduction in the standard of consumption of the Indian population. Even if you got some slight increase in the rate of saving, the amount of Indian saving which you are going to get during the next ten years is going to fall very far short for providing the necessary capital, even under the most favourable circumstances, for the development of Indian industries." Colin Clark "Rate of Economic Development in Different Countries"—article in "*India Quarterly*," Vol. IV, No. 1, 1948, p. 19.

3 "Problems of Capital Formation in Underdeveloped Countries," Ragnar Nurkse, 1953.

4 First Five Year Plan p. 27.

5 *Ibid* p. 437.

6 P. 224.

country possessed raw materials, untrained but cheap labour, and ready markets. As Indians were in the early days unfamiliar with the conduct of modern business, Englishmen and Scotchmen who were already established as traders in the country became the leaders of modern business enterprise in India. They invested their capital in coal mining companies, in jute mills, in tea and coffee plantations and in sugar. Most of the early industrial development of India was accomplished with the help of foreign capital. In more recent times, though a certain amount of shares in industrial concerns has changed hands and has been taken by Indians, foreign capital has been freely allowed to take shelter behind the tariff walls and to enjoy the advantages of the protective policy without any restriction.

The Montague-Chelmsford Report referred with a kind of stolid indifference to the possibility of foreign capital financing Indian industries under the protection afforded by the tariff wall. The Fiscal Commission (1923), on the other hand, pointed out how Indian public opinion regarded with suspicion the flow of foreign capital into India on the ground that the vested interests in foreign capital tend to be antagonistic to political progress and that enterprises under foreign capital deny to Indians opportunities for training and responsible employment.

The Fiscal Commission of 1923 went to the length of suggesting that the foreign capitalist imports into the country the technical knowledge and organisation which are needed to give an impetus to industrial development—a knowledge that can be readily imported, as in the U.S.S.R., without the import of foreign capital. Indian public opinion with regard to the value of foreign capital investments in India did not definitely express itself till 1922. The Fiscal Commission (1923) pointed out that witnesses did not wish foreign capital to be admitted except under definite restrictions. This distrust of foreign capital was due to the fear that the non-Indian interests would find shelter under a protective policy, and that they would refuse to train up Indians. The Fiscal Commission favoured rapid industrialisation even with the help of foreign capital, which would bring to the country the latest ideas and methods. The minority of the Commission, however, in a minute of dissent, laid down three conditions which foreign capital should satisfy when invested in manufacturing industries: (1) that such company should be incorporated and registered in India in rupee capital, (2) that there should be a reasonable proportion of Indian directors on the Board; and (3)

that reasonable facilities should be offered for the training of Indian apprentices.

The restrictions which the dissenting minority proposed were later on endorsed in part by the External Capital Committee in 1925. The Committee recommended that concessions to foreign capital should be subject to control: (a) where the concession is general as in the case of a protective tariff, no discrimination is practicable; (b) where assistance like a bounty is given to any undertaking, discrimination is feasible. No such assistance should be granted to a company unless reasonable facilities are offered for the training of Indians. In the case of a public company, it should be registered under the Indian Companies Act, its share capital should be expressed in rupees; and such proportion of the directors as Government prescribe should consist of Indians.[1]

None of these recommendations was embodied in legislation. On the other hand, the provisions of the Government of India Act of 1935 laid down that no disability in regard to the holding of property or the carrying on of any occupation or trade could be imposed on a British subject in British India. It was reserved to the British Parliament to incorporate into a constitutional document under which India was to be governed a discriminatory clause not only protecting non-Indian interests, but discriminating in favour of such interests.

The Advisory Planning Board, appointed in 1946, reported in 1947. Dealing with the question of foreign capital, whilst it admitted the possibility in the case of highly specialised industries of permitting foreign capital under effective control in Indian hands, it stated that the intrusion of foreign firms in the field of Indian industry should not be allowed. Whilst basic industries were to be entirely free from foreign control, even "in the case of consumer goods there are good reasons for a simlar restriction. If foreign companies with their vast resources, technical and financial, are allowed to establish themselves in industry in the fields at present not covered by Indian enterprise, there is little chance of that enterprise being brought into existence at a future date."[2]

The National Planning Committee in its Report on Industrial Finance was even more drastic in its recommendations. It laid down conditions on which alone foreign capital may be invested in

1 Report of the External Capital Committee, 1925, pp. 15-16.
2 Report, p. 17.

India: (1) No foreign capital was to be invested in any branch of production under the National Plan except at the instance of the Government, in enterprises owned and managed entirely by Government. (2) Such capital was to be secured on the collective credit of the State. (3) Foreign capital, except under condition (1) was not to be allowed in any key or essential industry, or in working minerals or other forms of natural wealth. Existing concessions in this connection were to be terminated at an early date. (4) No private enterprise, if any be left, when the full National Plan comes into operation, should be permitted to have any part of its capital from foreign sources. (5) No foreign capital was to be invested in any concern without the previous sanction of the Central Government, and subject to conditions to be laid down by the Planning authority. (6) Foreign capital at present invested in essential industries, or in minerals and other forms of natural wealth should be taken over by the State as soon as possible. (7) No industrial enterprise with foreign capital should be allowed to camouflage itself as Indian enterprise by registering in India, or by adding the word "India" after their normal style and title.[1]

The views of the National Planning Committee of which Jawaharlal Nehru was Chairman were endorsed in the Government Resolution on Industrial Policy issued in April 1948. The Resolution referred to the early establishment of a National Planning Commission to promote a rise in the standard of living of the people. While foreign capital would be of value in the rapid industrialisation of the country, the conditions on which it could participate in Indian industry would have to be carefully regulated. The major interest in ownership and effective control would always be in Indian hands, and suitable legislation was to be introduced for this purpose. The tariff policy of government was to be designed to prevent unfair foreign competition and to promote the utilisation of India's resources, without imposing unprofitable burdens on the consumer.

The Fiscal Commission (1949-50) recognises the need for foreign capital, but limits the fields for investment to projects in the public sector which depend on the import of capital goods, e.g., hydro-electric schemes and undertakings in the private sector which involve new lines of production, and where indigenous capital and management are not likely to be forthcoming. Moreover, the form in which foreign capital is to be obtained is to be the indirect form of investment, in cases where foreign capital is

1 Pp. 40-41.

needed only to pay for machinery and equipment. In such cases foreign capital is necessary primarily because of exchange difficulties. Such capital may be made available from institutions like the International Bank for Reconstruction and Development or the Export-Import Bank in the U.S.A. The direct or equity form of investment will be appropriate in cases where besides capital, technical knowledge is also needed. In new lines of manufacture, involving difficult processes, the equity form of foreign investments ensures the adoption of efficient techniques. The Commission, however, seem to be so enamoured of the need for foreign capital that they end by saying that it should be the duty of State policy "to create and maintain conditions favourable to the inflow of all such foreign capital as desires to come to India."[1]

This somewhat changed attitude, markedly contrasted as it was with earlier pronouncements of Government and semi-Government committees, was obviously the echo of the Prime Minister's statement in the Constituent Assembly on 6th April, 1949. "The stress on the need to regulate in the national interest the scope and manner of foreign capital arose from past association of foreign capital and control with foreign domination of the economy of the country. But circumstances today are quite different. The object of our regulation should therefore be the utilisation of foreign capital in a manner most advantageous to the country." Though, as a rule, control of foreign concerns was to be in Indian hands, Government would not object to foreign capital having control of a concern for a limited period, if it was found to be in the national interest. In regard to personnel, if Indians of requisite qualifications were not available, Government would not object to the employment of non-Indians in posts requiring technical skill and experience. The statement ended with the observation that there was considerable scope for the investment of British and other non-Indian capital. "Government would gladly welcome their contribution in a constructive and co-operative role in the development of India's economy."[2]

These assurances were again authoritatively endorsed by the Finance Minister from time to time.[3]

The Planning Commission in repeating the assurances given by Government to foreign capital observe that foreign capital

1 Report, pp. 213-15.

2 See Chapter on Fiscal Policy, section on Concluding Observations for further details of the Statement.

3 See the Finance Minister's Statement before the Indian Merchants' Chamber in 1952 quoted in chapter on Fiscal policy.

has an important part to play. They observe, further, that as there is a heavy demand on resources for domestic investment in surplus countries, and as the rate of return to capital in some of the industrially advanced countries is higher than that obtainable in India, it is of the highest importance to ensure to the foreign investor the prospects of a fairly good return and the certainty of fair and equitable treatment.[1]

The transition from opposition to warm invitation to foreign capital which is evident and has been emphasised in the Planning Commission's Report was started with a Resolution formally accepted by Parliament on 6th April, 1948, which ruled out nationalisation for 10 years and left open all industries for private enterprise except munitions, railways and electricity. The only important condition laid down was that "as a rule, the major interest in ownership and effective control should be in Indian hands." But the Resolution also stated that "power will be taken to deal with exceptional cases in a manner calculated to serve the national interest."

Between 1945 and 1949 three American concerns were established—the Good Year Tyre and Rubber Co. (India) Ltd., the Indian Aluminium Co. and the Ramington Rand Co. After 1949, American investments in India found scope in the establishment of the Coca-Cola Export Corporation, the Atul Products Dyes and Chemicals Co., the Sarabhai Chemicals of Baroda; and the latest of all projected investments are those of the Standard Vacuum Oil Company and the California and Texas Co. in India.

In November, 1951, one of our big Indian businessmen—G. D. Birla—suggested the formation of an Indo-American Development Corporation consisting of businessmen and officials of both countries, a kind of super-trust directing the future of Indian economy. So, likewise, in January, 1952, Mr. B. R. Sen, speaking before the Far East America Council of Commerce and Industry referred to two types of American investment in India, one of American corporate participation in consortiums supporting various industries, the Indian Government joining as a guarantee of confidence and the other, an investment company in which American and Indian private capital would participate initially on a 70-30 per cent basis. The idea of such partnerships was blessed by the U.S. Ambassador, Chester Bowles, speaking at the Indian Merchants' Chamber in Bombay as meeting the

1 First Five Year Plan, pp. 437-38.

problem of equipment and foreign capital so sorely needed by India.[1]

The main objection to the employment of foreign capital in India has always been that it draws away and out of the country the surplus production in the shape of profits from year to year—a surplus out of which further production capital could be built for the expansion of Indian industrial enterprise. It is not necessary to cite figures of the exact amount of profits repatriated abroad, but in view of the high proportion of foreign capital dominating our industries, the loss is considerable and effectively retards our capital formation. Moreover, "Encouragement to foreign private capitalists is tantamount to wanting to or guaranteeing to maintain a private enterprise economy internally for an indefinite period of time."[2]

It has been said that the pronouncement of the Prime Minister of April, 1949, committed Goverment to the policy of non-discrimination only in respect of existing foreign interests in India. But the Finance Member and the Member for Industry and Supply[3] have suggested that the principle should be made applicable to future foreign investments. Even if the principle is confined to existing foreign capital, indigenous enterprise obviously cannot long stand the competition of foreign interests, and the fundamental objective of granting protection and assistance to indigenous industries which Fiscal Commissions and Tariff Boards have sought to implement in their recommendations to Government will be frustrated. With their huge financial resources and capacity for cut-throat competition foreign concerns have already driven to the wall comparatively smaller indigenous concerns. The Advisory Planning Committee, in its Report, pointed out referring to investments in consumer

1 L Natarajan, "American Shadow over India," 1952 ch. V. "The Indian and American Governments seem to consider it among their functions to officiate as high-priests at the "illegitimate marriage" of Indian and American big business Coming at the end of a series of concessions. such new joint companies, formed with active governmental support from both sides, would have more serious repercussions than the joint companies of the war era. They would create new foreign vested interests profiting at the expense of Indian consumers. They would strengthen Indian big business and stultify competition by smaller businessmen in India. They would reinforce foreign domination of vital sectors of the Indian economy, making it difficult for India to chart a new course in economic development at a later time. If this generation, as Pandit Nehru declared, has been sentenced to hard labour, the fruit of this labour for the next generation threatens to be hard struggle against new and powerful vested interests." p. 93.

2 D R Gadgil, "Economic Development in India" in "Economic problems of under-developed Countries in Asia," 1953, p. 109.

3 Cf. The Hon. Dr. Syamprasad Mukerjee's Statement: "Once a foreign concern was admitted to establish its factory it would be treated exactly in the same manner as any other Indian concern." An official statement of the Government of India in September, 1949, clarified the position: "The policy of the Government of India was to allow foreign capital to come in to operate freely in the industrial

goods industries: "If foreign companies, with their vast resources, technical and financial, are allowed to establish themselves in industry in the fields not covered by Indian enterprise, there is little chance, in our opinion, of that enterprise being brought into existence at a future date." "It seems to us preferable that the goods which the country cannot produce at present, but would be in a position to produce later on, should continue to be imported from other countries rather than that their local manufacture should be started or expanded by foreign firms. In the course of time it will be possible to restrict or discontinue foreign imports. but vested interests once created would be difficult to dislodge."[1]

There have been instances in which in spite of the protests of existing indigenous industries in the country foreign concerns have been permitted to set up factories of their own, without any consideration to the overall production capacity of indigenous industries, e.g., soap, biscuits, cocoa and chocolates, sewing machines, etc. It is difficult to understand why "our Government have ignored indigenous interests, and are permitting foreign interests to set up their own factories in the very fields in which the indigenous production is either already sufficient or can be easily stepped up to meet the country's full demands."[2] Not even by the remotest stretch of imagination can such foreign investments be regarded as advantageous to the country.

Estimates of Foreign Capital Investments

It is difficult to estimate the total foreign capital invested in India. It was estimated at £298,000,000 in 1914, and at £831,000,000 in 1932-33. An article in the *Financial Times* of 9th January, 1930, stated that the £700 million figure would probably not be very wide of the mark. "The importance of our financial stake in India," the writer continued, "is fully recognised probably, only by a limited number of experts. Most people have no real conception of either its magnitude or diversity. Many merchants, bankers and manufacturers who are actually engaged in the trade would probably find it hard to arrive at even an approximate computation of the actual amount of the capital and services which is represented. External capital enters India in such a number of forms that any calculation must be largely guess work."

field........ Every attempt must be made to secure the maximum possible influx of foreign capital in the shortest possible time. The Government of India categorically declared that permission to retain a majority of non-Indian interest in the ownership and effective control in some cases could not *ipso facto* be considered as detrimental to the interests of the country." The *Hindu*, September, 19, 1949, quoted by L. Natrajan, op. cit. p. 71.

1 Report, p. 17.

2 Fiscal Commission (1949-50), Vol III, p. 121. (Evidence).

An estimate by the British Associated Chambers of Commerce in India for 1933 put the figure at £1,000 million as under:—

	(in millions of £)
Sterling Debt of the Government	379
Companies registered outside but operating in India	500
Companies registered in India and the rest	121

There was an increase in sterling investments in India by £250,000,000 between 1917-18 and 1938-39, but it has fallen in the last decade by £60,000,000. The estimated total of pre-war British foreign investments in the world as a whole was £4,000 million including the sterling debt of the Government of India which has now been paid off; about one-fifth or 20 per cent of these investments were in India. In 1911, Sir George Paish had calculated the investments in India at 11 per cent of the total foreign investments of Britain. Most of the British investments in other countries were liquidated during the war period, whilst today, the actual profits of these investments in India are higher, despite some repatriation.

Taking the returns given in the latest Statistical Abstract (1950), we find that in 1948-49 the sterling capital, that is, the paid-up capital of joint-stock companies registered elsewhere than in India, but working in India, was distributed as follows:—[1]

Joint Stock Companies registered elsewhere than in India but working in A and C States	£
Banking and Loan	97,382,915
Insurance	19,486,605
Navigation	32,518,660
Railways and Tramways	13,475,000
Other Travel and Transport	16,831,202
Trading and Manufacturing Companies	259,045,134
Tea	25,735,228
Other Plantation Companies	2,348,036
Coal Mining	240,000
Other Mining and Quarrying Companies	109,888,532
Cotton Mills	271,778
Jute Mills	3,295,587
Cotton Ginning, Pressing Companies	50,000
Estate, Land and Building	346,740
Sugar (including Jaggery)	306,656
Other Companies	5,970,693
Total A and C States	**587,192,766**
Total B States	**96,565,092**
Grand Total	**683,757,858**

The following table gives us comparative figures:—

	1938-39	1945-46	1946-47	1947-48
A and C States	740,128,926	696,930,840	695,460,880	677,264,845
B States	4,237,012	28,968,173	28,629,520	28,593,173
Total	**744,365,938**	**725,899,013**	**724,090,400**	**705,858,018**

1 Statistical Abstract, 1950, Table No. 136, pp. 478 *et seq.*

The sterling debt of the Government of India which amounted to £350,000,000 in 1938-39 has been wiped out with the help of the sterling claims on England, which the war enabled India to acquire through her war supplies to the belligerents. Comparing with the above figures the figures for 1917-18, we find there is a remarkable rise from £23 million for Banking and Loan Companies in 1917-18 to £97 million in 1948-49. There is a similar rise in trading and manufacturing companies from £171 million in 1917-18 to £344 million in 1938-39, with a decline to £259 million in 1948-49. It will be noted that the total amount of sterling capital was £744 million in 1938-39, £726 million in 1945-46 and £724 million in 1946-47, for undivided India. The figures for Indian Union are £706 million in 1947-48 and £684 million in 1948-49. Though there is a small fall in British investments in the last few years, there has been a fresh impetus to the investment of foreign capital in India, particularly after the announcement by the Prime Minister of the policy of Government in April, 1949, giving assurance to foreign investors that no discrimination will be made between foreign and Indian undertakings, that facilities will be given for remittance of profits, and fair compensation will be paid in case of nationalisation. Detailed figures are not available, but according to the *Eastern Economist*,[1] from July, 1948 to June, 1950, Rs. 6.34 crores of British capital was invested in India. In a statement made by Shri Mahtab, the Industries Minister, to Parliament on the 3rd April, 1951, 88 cases of industrial projects with foreign participation were finalised during the three years after Independence. The total capital applied for was Rs. 22.67 crores of which Rs. 10.47 was foreign.

Mr. Findlay Shirras in a brochure pointed out that such calculations were incorrect, because they included companies doing business in other countries as well as in India. He estimated for 1929-30 the total sterling investments at £500,000,000.[2] Even assuming his argument to be correct, we have to take into account the increasing imports of sterling capital during the last few years of companies registered in India with a rupee capital. It is well-known that the match industry in India is a huge combine run with foreign capital and under foreign control.

1 December. 29. 1950.

2 "Poverty and Kindred Economic Problems in India," 3rd Edition, 1935, p. 22.

We are happy to note that the suggestion made by us in our first edition, (1943), that the Reserve Bank of India should organise an enquiry into the extent and amount of foreign investment in India has borne fruit. The Reserve Bank of India made the first attempt to collect the data regarding foreign investments and has published its first Census of Indian Foreign Liabilities and Assets, as on the 30th June, 1948, with an analysis of the revenue on Government, semi-Government and private business account. The Reserve Bank has emphasised that the results are tentative and incomplete, as some concerns did not answer the questionnaire and also because the foreign holdings in Indian concerns are not included.

According to this report the total foreign business investments in India amounted, on the 30th June, 1948, to Rs. 320.42 crores, out of which British investments were Rs. 230 crores, i.e., 72 per cent of the total.[1] It should be noted, however, that this figure excludes all Banking and Loan Companies who control nearly the whole of our foreign trade. In view of the fact that during the war period British investments in India, were not liquidated as in Canada and U.S.A., and also that the repatriation of British capital after India acquired Independence has been meagre the figure given by the Reserve Bank Census must be regarded as an under-estimate.[2]

The employment of foreign capital in India and its possible effects on the economic life of the country is a vital problem, and the accurate computation of the total amount of such foreign capital is a very difficult and complicated business, specially since the development of the "India Limiteds" and the mixed holdings in a number of companies in recent years. Certain companies that appear, *prima facie* as foreign, are now owned by a majority of Indians, e.g., Titaghur Paper Mills, Calcutta, have about 80 per cent Indian shareholders. There are other foreign concerns with a few Indian shareholders. A majority of the British controlled concerns have appointed some Indian Directors on their Boards, e.g., Jatia Brothers in Andrew Yule and Co., Mukerjees in Martin & Co. and so on. The words 'India Ltd.' are not always a sufficient clue to the foreign character of a

1 "Census of India's Foreign Liabilities and Assets," Reserve Bank of India, 1950, p. 84.

2 Cf: "The reduction in foreign investments in the last few years has been quite limited; Rs. 40 crores have been repatriated since independence, against which about Rs. 10 crores have come in, and the figures for the years before independence are probably of a very similar order." Taya Zinkin, "Foreign Capital in India," Eastern Economist Pamphlets, p. 38.

company, for all foreign concerns do not use these words while registering in India. Again, a number of subsidiaries of foreign companies are registered in India without any indication of their foreign nature in their names. In view of the vital nature of this question, the Reserve Bank of India should keep an accurate record of the changes in them from time to time.[1]

The Western India Match Co. is run with Swedish capital and under Swedish control. It had only four factories in 1928. It has now 11, in addition to the Indian companies which it controls by holding a large proportion of their capital. The company also controls the supply of Swedish and German match machinery through a subsidiary, namely, the Match Manufacturing Supply Company. As a result of this competition, about 30 Indian factories had to be closed down in ten years, 17 of them being in Bengal.[2]

The capital and resources of Lever Brothers, the most powerful soap concern in the world, are considerably greater than the combined strength of all the Indian soap manufacturers. Operating, as they are, under the protection of Indian Customs, it has been pointed out that it is very doubtful if the Indian industry can survive the competition. According to Dr. Gyanchand, "out of about 761 important firms at present in India, nearly 56 per cent of these firms are controlled by foreigners, and they cover a variety of industries including some of the more important industries (shipping, exports, foreign trade, banking, oil, coal, coffee, jute, tea, copper and heavy chemicals) in which British interests are more or less dominant. (Cotton 30%, coal 54%, engineering 48%, jute 80%, chemicals 30%, sugar 40%, electric supply 30%)."[3] The recent advertisement by the Indian

1 A similar suggestion, it is interesting to note, is to be found in a U. S. A. Treasury, announcement, as reported in the *Banker*, June, 1943: "Reports are required concerning all property, subject to the jurisdiction of the United States, which is foreign owned or in which a national of a foreign country has an interest, regardless of whether such property belongs to a foreign national, whose assets have been frozen under Executive Order, No. 8389." The *Banker* goes on to observe: "Although this American experiment has sprung from the exigencies of war, its most useful application will surely be in connection with the new international exchange system, for there is now widespread agreement, irrespective of the merits of particular schemes, that much greater knowledge is required of each country's foreign assets and liabilities....The U. S. plan enjoins member countries as a matter of policy, "to make available. . . full information on all (foreign owned) property in the form of deposits, securities and investments."—"United States War Finance," in the *Banker*, June, 1943, pp. 170-1.

2 Report of the Fiscal Commission, 1949-50, Vol. II (Written Evidence), p. 137. cf. "We understand that lately the Ministry of Industries and Supplies had been advocating the possibility of getting some foreign interests to come and establish a bigger unit for Aluminium production in this country and to ignore the existing industry which had been struggling for existence from its very infancy." Fiscal Commission Report, Vol. II, p. 363. (Written evidence of the Aluminium Corporation of India, Ltd.)

3 "Industrialisation of India and Commonwealth countries," *India Quarterly*, Vol. V No. 4, 1949 pp. 326 and 333.

soap manufacturers in the *Times of India* sounds like a lament that the purely indigenous industry is being throttled by the subsidiaries of the powerful international combines, which are permitted to work in India and are given all the facilities which are enjoyed by the indigenous industry.

The following figures from the memorandum of the Secretariat of the Central Cabinet illustrate the control of various Indian industries by foreign capital:

Petroleum Installations	97%	Coal	62%
Rubber	93%	Rubber Plantations	54%
Match	90%	Electrical	43%
Jute Manufactures	89%	Machinery Building	33%
Tea Plantations	86%	Textile	21%
Metallurgical	73%		

According to the memorandum foreign capital controls 46% of banking in India.[1] There is no doubt of any kind that the size of foreign investments in India in relation to total investments is substantial.[2]

As early as 1912, Alfred Chatterton in his "Industrial Evolution of India" endeavoured to demonstrate the futility of a protective policy by assuming that our rulers would not bar the entrance of foreign capital into the country. "Protection," he observed, "would attract capital from abroad, and with the capitalist would come the technical expert and the trained organiser of modern industrial undertakings. Success would undoubtedly attend their efforts, and India would contribute labour and raw materials. The educated Indian would play but a small part; and he would in course of time realise that the protective duties mainly served to enable Europeans to exploit the country." "India does not want a protective tariff to enable an artificial industrial system to be created, the masters of which will be able to take toll of the earnings of the country, and establish a drain on its resources which will in the long run retard progress."

It has been said that protection cost the Indian people about Rs. 500,000,000, but its main benefit accrued to foreign interests, mainly British. Even the cotton textile industry had before the war over 20 per cent of its capital in British hands.[3] In sugar, cement, paper, matches, the foreign share was substantial. To take full advantage of the policy of protection, foreign companies opened their subsidiaries in India, registered in India. The

1 Quoted by B. T. Ranadive "The Crises of Indian Economy," 1953, p. 136.
2 Colombo Plan, p. 17.
3 Asoka Mehta, "The Heights of Simla" 1940, p. 8.

giant concerns like Liver Brothers (Soap), Dunlop (Rubber), Imperial Chemicals, have their Indian subsidiaries. These non-Indian factories backed up with a big capital have started colossal production of matches, ciagrettes, soaps, boots and shoes, rubber, chemicals, etc., driving the Indian concerns to the wall.[1] Not only do they compete with large-scale industries but they also threaten our small-scale industries. In this connection, it is pertinent to note that even the Bombay Industrial and Economic Enquiry Committee was constrained to remark that the competition of the India Limiteds is a very real one. They observed: "We desire to draw the forceful attention of the Local Government to the difficulties which small Indian concerns are bound to, and indeed do, feel in the face of the competition of such concerns of a much larger size. If it is the objective of our industrial policy to encourage the establishment of small concerns, then the objective is defeated....if these large foreign concerns are permitted to establish themselves without reasonable and effective limitation."[2] Have we grown alive to the menace of '(India) Ltds.'?[3]

Capital Formation and Supply of Capital[4]

If the immediate problem before the country, in its efforts to improve the standard of living of the people, is the problem of increasing the total volume of production, both in agriculture and in industries, it is obvious that we need capital in large quantities; and the wider the range of production that we seek to achieve over a definite period of years, the larger is the amount of capital that we shall require. The question of capital formation thus acquires vital importance for the country. It is a truism that the capital supply of our country falls short even of our normal requirements. It was estimated that the national income of India before the war was equivalent to Rs. 2,000 crores and that our savings annually amounted to Rs. 120 crores or 6 per cent of our income. The national income in 1948-49 was stated to be between Rs. 8,000 and Rs. 9,000 crores. At the 6 per cent rate our savings would have amounted to

1 *Ibid.*, p. 11.

2 Report, 1940, pp. 168-69.

3 Some of the important foreign concerns of this types are: Lever Bros. (India) Ltd., Kores (India) Ltd., Caltex (India) Ltd., Candy Filters (India) Ltd., Dunlop Rubber Co. (India) Ltd., Goodyear Tyre & Rubber Co. (India) Ltd., Marshall Sons & Co. (India) Ltd., Siemens (India) Ltd., Skoda (India) Ltd., Tide Water Oil co., (India) Ltd., (*vide* Harijan, Vol. VI, No. 29, p. 231). A list of 122 such foreign companies and another of 58 has been published in *Harijan* Vol. VI, No. 30, pp. 245-246 and No. 33, p. 264 respectively. The lists are not exhaustive.

4 Capital supply depends on savings or aid from abroad. whilst capital formation is the transformation of this supply into tangible capital goods.

Rs. 480 crores. But population increased in the interval by 10 per cent, whilst our production has not kept pace with this increase. The extent of our voluntary savings might not be more than Rs. 350-450 crores.[1]

The estimates supplied by the ECAFE Committee have been challenged. But even assuming them to be correct, the Planning Commission point out that a high rate of capital formation is essential for economic development, that a doubling of the *per capita* income within 25 to 30 years in countries like the U.K. and the U.S.A. required a rate of net investment of 12 to 15 per cent of the national income. For a population like that of India growing at the rate of 1¼ per cent per annum the rate of investment needed for maintaining *per capita* income *constant* is between 4 and 5 per cent of the national income. The gravity of our problem is acknowledged by the Planning Commission when it observes that the attempt to secure a high rate of capital formation right at the start would involve excessive privation and suffering.

The reasons for the slow formation of capital resources are obvious. The low production and productivity are mainly responsible for the low margin of savings.[2] Those who seek to account for the phenomenon by vague references to the shift of income from the saving classes to the non-saving rural population seem to forget that most of the agriculture in India is of a self-subsistent character. The Fiscal Commission (1949-50) draw attention to the fear of nationalisation as one of the factors that hinders the attraction of capital to industries; they seem to have overlooked the counter-attraction to industries afforded by the issue of bonus shares, a device to escape taxation on the part of our industrialists. It has also to be remembered that the lack of a well-developed banking organisation definitely stands in the way of converting even such savings as the country has into funds available for investment, and leads to hoarding or capital exports.

1 "Mobilisation of Domestic Savings in some Countries of Asia and the Far East," U.N. Publication, Bangkok, 1951, p. 123.

2 "In a population of over 360,000,000 only about 700,000 are in a position to pay any taxes. The net income per head is just under £19. In these conditions to talk of a higher general rate of saving—in other words of a further restriction of consumption—is to cut a percentage of Indians out of existence altogether. More could no doubt be done to transfer wealth from the few very wealthy families, but the aggregate result would be negligible; and, in any case, there is little tradition of conscientious tax paying among the rich in India. As for the middle classes, they have already been reduced to a considerable degree of frustration by the combined effect of inflation and taxation since the war." *Economist* 20th December 1952, quoted in "War on World Poverty" Harold Wilson, 1953, p. 127.

What then, are the sources left to us which can be successfully tapped for the growing capital requirements of our economy under the Five Year Plan? In his "Planning of Free Societies," Zweig observes: "In undeveloped countries where no genuine savings are available for building up new forms of industry needed for defence or progress and new investment funds must be created by enforced savings through control of consumption and production, there must be a substantial drive towards State ownership in industry. The funds created by enforced savings by the entire population are to some extent collective funds which can hardly be transformed into private capital."[1] In this connection we cannot help quoting what we said two years ago. "We need a bold policy of nationalisation so that industries can be run in the interests of the community and their profits go to swell capital formation. We have witnessed in the last few years the outright sale of insurance companies and industrial concerns by the transfer of managing agency rights. Such a thing can only be possible in a country like ours where the greed of speculators masquerading under the name of industrialists and businessmen have a free run. Mere company law reforms and stringent rules about managing agency system will not be of much help to cure this deep-rooted malady. Further, the bugbear of compensation need not stand in the way. We have heard much in our times about "fair" compensation. But what is fair? Awarding a special bonus over and above the principal stipulated in the Reserve Bank of India Act, to the shareholders of the Bank, an enterprise in which no risks of any kind were involved, can only be regarded as evidence of the Government's interest in a particular class as against the mass of the people. If this is the pattern of compensation which is to be asked for and paid, we might as well give up all hopes of the community taking over private enterprise............ Even a Gandhite labour leader like Shri Khandubhai Desai has been compelled to say with regard to the cotton textile industry: "The industry in equity, morality, and even on economic grounds belongs to the nation which was made compulsorily to pay much more than the total value of these 420 mills which in fairness should now be transferred to the State without any compensation."[2]

Another source of capital supply is hoarded gold and silver. The authors of the Bombay Plan counted on Rs. 300

1 P. 103.
2 "Five Year Plan—A Criticism," 1952. pp. 70-71.

crores worth of this hoarded wealth in financing their plan. According to B. Datta during 1900-01 to 1950-51 India imported 45 million ounces of gold, in spite of a large outflow during 1931-42. Adding to this the domestic production of 1 million ounces during this period and the sale of 7.5 million ounces by the Allied Governments during the war, we have a net increase of 53.5 million ounces in our gold stock, which valued at the U.S. official price of $35 per ounce would amount to Rs. 890 crores. The net absorption of about 2700 million ounces of silver during this period would be worth about Rs. 960 crores at the price of 75 cents and ounce.[1] There is, thus, an appreciable amount of hoarded gold and silver in the country which constitutes an available source of finance for our economic development.[2] Government commanding the implicit confidence of the people can tap this source by creating an atmosphere of mass enthusiasm. Such an atmosphere can only be created by tangible demonstration of a spirit of self-sacrifice on the part of the administration and responsible leaders which today is only a devout hope.

The Food and Agriculture Organization of the United Nations in its Report on International Investment suggested among measures for increased savings and investment, in underdeveloped countries with a low level of income, the provision of opportunities for and encouraging voluntary unpaid labour by workers during week ends. Perhaps the opportunities are more abundant in a country like India with a large proportion of landless labourers dependent on agriculture. The village community projects are experiments in this direction. But, the F.A.O. Report observes, this is only feasible where there is widespread public support of the development programme and a hope for future improvement sufficient to sustain the population in accepting severe present sacrifices for the sake of future gains.[3] In the absence of such enthusiasm, payment of labour by created money involves the risk of inflation disastrous for a country like ours.

Another method of tapping savings lies in the direction of abandoning the cheap money policy and raising the rate of interest on long-term loans with a view to draining the remnants of

1 "Economics of Industrialisation," 1952, p. 241.

2 Cf. "Both as a means of reducing exorbitant rates of interest, of increasing revenues to Government and mobilising some of the accumulated jewellery and gold, the Indian Government might investigate the practicability for India of a scheme of Government pawn shops integrated with co-operative units, on the line of those existing in Indonesia and Indo-China." "Mobilisation of Domestic Capital in Certain Countries of Asia and Far East," p. 140.

3 "Methods of Financing Economic Development in Under-developed Countries" U. N. 1949, p. 84.

blackmarket money and bringing out such hoarded wealth as still lies unutilised with a people unused to banking habits.

More recently, economists have pointed out that in under-developed countries that are overpopulated with a vast rural population, there is a considerable amount of disguised unemployment. They regard this unemployment as a saving potential, in as much as the surplus population can be taken off the land and set to work on capital projects like irrigation, drainage and roads and housing. These unproductive labourers are sustained by the productive labourers who thus perform a virtual saving. If they send these dependants to work on capital projects—they may be cousins, brothers, nephews—and continue to feed them, their virtual saving would become effective saving. The capital which these workers would require would be simple tools and equipment. River dams, for instance, may be built by men and women carrying earth in head baskets.[1] There are, however, two assumptions underlying this source of capital formation which are open to doubt. In the first place, this disguised unemployment if it is to be tapped effectively implies the creation of an atmosphere of mass enthusiasm of which there is not much evidence in our country. In the second place, there is the rapidly growing population which might nullify any improvement in the level of material welfare, unless there are sudden social changes like raising the legal minimum age of marriage and the widespread use of contraceptive methods.

It may likewise be pointed out that the huge funds lying at the disposal of charitable trusts and temples—funds for feeding Sadhus, funds for feeding pigeons and decrepit animals like cows—offer a source of revenue which might well be utilised in the larger interests of the country. Henry VIII could confiscate church properties without any national upheaval; it needed a revolutionary upheaval in 1789 in France and 1917 in Russia to use church property and that of the nobility for national purposes. If we could successfully override the traditions of centuries by forcing temple entry for Harijans, it does not need a bolder statesmanship to utilise temple funds for the Five Year Plan, or the jewellery and accumulated wealth of our Indian nobility—the Princes and the Maharajas—in the construction of power plants and the establishment of key industries.

Finally, there is one more source of mobilising capital which Western countries have often resorted to in our days, namely, the

1 Ragnar Nurske, op. cit. pp. 32-47.

issue of prize bonds and lotteries by the State, which have proved more attractive to the investor than short or long dated loans.

Future Prospects

We have already referred to the menace of foreign concerns passing themselves off as Indian concerns; and it is really sad to note that not only no action has been taken against these foreign concerns which prevent the growth of Indian concerns by their capacity of cut-throat competition and driving to the wall the Indian concerns which ordinarily lack strong financial backing, but that they are being actually encouraged by our national Government. Moreover, these foreign concerns take the benefit of a protection which should really aim at giving help to the indigenous concerns only, and not to the foreign concerns. If we do not want the whole of our future development to come under the domination of foreign finance-capitalism, a radical change in policy is needed.

Whilst we fully recognise the services which foreign capital rendered to this country in the early days of British rule, at the stage of economic development that we have reached today, we have no hesitation in saying that if this country needs foreign capital, it should obtain this capital by borrowing abroad on reasonable terms, instead of allowing private investors and joint-stock companies to exploit its resources, and tolerating the economic penetration of the country that has marked the earlier period of its industrial life. As a matter of fact what has happened is that, whilst the sterling loans raised abroad for the development of railways and irrigation works, which were borrowed on reasonable terms, have been paid off by the Government of India, taking advantage of the phenomenally favourable trade balances during 1941 and 1942, the British Government remained stolidly indifferent to the demand for liquidating by the same mechanism the private sterling capital invested in our industries. The attitude was in striking contrast to what was done in U.S.A., South Africa and Canada. Not only the British holdings in 112 Common Stocks, 31 Preferred Stocks and 22 Bond Issues were liquidated in U.S.A., but some of the investments had been sold even at a loss; e.g., the assets in American Viscose The Dominion of South Africa liquidated practically all the British holdings in the South African Gold Mines, while Canada secured the British-owned Canadian securities and Railway stock.[1]

It has been suggested that external capital is to some extent

1 *Vide*, "Utilisation of Stering Credits of India," Federation of Indian Chambers of Commerce and Industry, 1943, pp. 6-7.

necessary in the present circumstances, for the purpose of hastening industrialisation and shortening the period of the consumer's sacrifice, and for providing it with the modern equipment of industry. The change in India's financial condition during the last few years, which has much improved, gives India ample opportunities for commanding such modern equipment as it may require in the future. The consumer's sacrifice is a familiar argument with traders; but it is a question of balancing the gains of industrialisation against a low standard of life such as acceptance of the economic *status quo* in India involves. As for hastening industrialisation by the help of external capital, we have already stated that there is no objection to such a policy provided the external capital is borrowed as a loan on equitable terms.

It is, however, necessary to raise a note of warning against tendencies that lie ahead. The mere fact that we have acquired Independence does not lessen the dangers of infiltration of foreign capital. We have referred in the earlier pages to the establishment of a number of companies with British capital known as the India Limiteds, not the least important of which is the Imperial Chemical Industries (India) Limited. A publication[1] sponsored by British capitalists refers to this company as "a solace to our military leaders and to the industrialists and businessmen of India a source of ineffable satisfaction." After referring to the potentialities of investment in iron and steel, hydro-electric projects, railway expansion, tea and jute and petroleum, and the need of India for assistance in skill and enterprise and money, the publication goes on to say: "If the British pound and the Indian rupee participate to the fullest extent in the movement, then the East and West may join together in the march towards a great prosperity that lies probably ahead." Indian businessmen and industrialists have been invited to conferences in Great Britain and America; Indian scientists have vexed eloquent over the possibilities of an *entente cordiale* between Indian and British industrialists. Even exhortations about the desirability of a partnership between Indian and British capitalists have been received with a chorus of jubilant approval by the Press. And this rapprochement has not been one-sided: our Indian businessmen and indus-

1 "Future of Investment in India," C. F. C., London, September, 1944. The alliance between Indian and British industrialists is being extended to an alliance between Indian and American industrialists. Birlas have signed an agreement with Studebaker, Messrs. Walchand Hirachand have concluded a similar agreement with Chrysler Corporation. The National Rayon Corporation have made an agreement with Skenandos Rayon Corporation, one of the leading Rayon Yarn producers of U.S.A. and with Lockwood Greene & Co., Consulting Engineers of New York. (S. Sarma, Foreign Investments in India, 1951, p. 39).

trialists are as anxious for this partnership as British industrialists have been.

Such holy partnerships are actually supported by the Government of India and the Planning Commission. The exploitation of the masses of India which was in the past carried on by Indian and foreign capitalists in a spirit of rivalry is now, under a free India, to be carried out in an amicable partnership and on an organised basis by an alliance between the two. And to complete the picture, the partnership is to be tripartite with the Government consenting to have a share in the establishment of foreign concerns. The latest achievement in this direction is the establishment of oil refineries with American control in a country which has to depend for crude oil on American help. It is but in the fitness of things that Indian industrialists should hail the Five Year Plan as the acme of wisdom. Addressing the annual meeting of the United Commercial Bank, Ltd., Mr. G. D. Birla observed: "I am glad the Government have confined their task to the undertaking of a few economic programmes of basic and public character. Excepting agriculture, irrigation and transport it has left the entire field of economic enterprise to private effort. And this is a right thing that they have done."[1]

The political implications and the dangers of foreign aid, are being recognised in recent months and Pandit Nehru is repeatedly emphasising the need for self-reliance in the financing of the Plan.

The U.S.S.R. had not much fixed capital in the early days of the establishment of the new regime. It was able within twenty years to achieve an economic development which took a century and more in other countries to bring about. Revolutionary Russia expected no aid from abroad nor did she desire to become dependent on foreign capitalists. Its modern economy has been built up out of production goods rendered possible by limiting the consumption of the masses, and involving heavy sacrifices upon the people for a period. The prospects for industrialisation if we plump for full scale industrialisation, are very much brighter today in India than they were for Soviet Russia in 1917.[2] But it must not be overlooked that such industrialisation will involve radical changes in the social and economic structure of our country for which we do not seem to be prepared today.

1 Quoted in "The Crises of Indian Economy," B. T. Ranadive, p. 204.

2 Mr. Colin Clark's views in this connection are worth noting. According to him, our savings are meagre and our capital needs very heavy. But realising the dangers of foreign capital he advises Indians to nationalise key industries, and to keep the sector of consumers' industries only open for private enterprise, so that foreign capital cannot do any mischief. He also advises the development of cottage industries. Op. Cit. p. 20.

CHAPTER XXVIII

COTTAGE AND SMALL-SCALE INDUSTRIES

In 1931, out of a total population of 353 millions about 10 per cent or 35 millions were dependent on industries. During the twenty years between 1911 and 1931, the number of workers employed in all types of industry markedly declined in spite of the stimulus given to Indian manufacturing enterprises by the first world war. The following table shows the extent of the decline :—[1]

	1911	1931	Percentage of variation
Population (in millions)	315	353	+12.1
Working population (in millions) ..	149	154	+ 4.0
Persons employed in industries (in millions)	17.5	15.3	—12.6
Percentage of workers in industry to working population	11.7	10	— 9.1
Percentage of industrial workers to total population	5.5	4.3	—21.8

There was a decrease of industrial workers by more than two million as a result of the continued decline of the traditional handicraft industries, and the population thus displaced was not absorbed in large-scale factory work. Taking the figures of the average number of workers daily employed in factories (industries that employed more than 20 workers), we find that in 1939 these factories employed 1,751,000 persons. Taking the working population to have increased from 154 to 158 million in the same period, the proportion of factory workers would be about 1.1 per cent of the total working population. If we add to this figure about a million more workers employed in mines and railways, the percentage would increase to 1.7 of the working population.

An attempt at obtaining detailed information about the occupational distribution of the population has been made in the Census of 1951, but comparison with the figures of earlier census returns has been made difficult due to variations in the basis of occupational classification. The trends of employment since 1901 recently worked out by the All-India Khadi and Village Industries Board help us to an extent in understanding the development of employment during the last fifty years. The variations in the proportions of workers and non-earning dependants to the total population since 1901 are indicated in the following table:—[2]

1 Kate Mitchell, op. cit., p. 277.

2 "Planning for Full Employment," issued by All-India Khadi and Village Industries Board, 1954, p. 130.

Year	Workers in millions	%	Non-working dependants in millions	%
1901	103.6	50.1	103.3	49.9
1911	125.5	49.6	127.8	50.4
1921	122.7	48.6	129.5	51.4
1931	129.7	47.0	146.5	53.0
1951	142.3	39.9	214.3	60.1

The fall in proportion of workers is marked between 1931 and 1951, and there has been a steady increase in the number of non-earning dependants.

The Report of the All-India Khadi and Village Industries Board throws interesting sidelight on employment trends in individual industries.[1] In the cotton textile industry, the absolute figures of employment have fallen from over 33 lakhs in 1911 to 27 lakhs in 1951. This decline is largely due to the establishment of mills of cotton ginning, cleaning and pressing, and of cotton spinning, sizing and weaving. The organised sector has gained in employment at the cost of the unorganised sector:—

	Organised		Unorganised	
	1901	1951	1901	1951
Cotton ginning, cleaning and pressing	40,000	100,000	96,000	51,000
Cotton spinning, sizing and weaving	180,000	780,000	284,000 (1911)	167,000

In cotton dyeing, bleaching and printing, the organised sector has not affected the unorganised sector to the same extent. In the silk industry, the number has fallen from 161,000 in 1911 to 54,000 in 1951. The number of workers in silk mills has increased from 10,000 to 22,000, whereas in the unorganised sector the numbers have fallen from 150,000 in 1911 to 32,000 in 1951. Similarly in the wool industry, the number of workers stands at 79,000 in 1951, as compared with 165,000 in 1901. In the organised sector, the number has increased to 22,000, whereas in the unorganised sector it has gone down from 153,000 in 1911 to 57,000 in 1951.

In brief, increase in the number of those employed in the organised sector of industries has been achieved at the cost of those employed in the unorganised sector, that is, small-scale and cottage industries, thus emphasising the trend towards "de-industrialisation." It has been calculated on the basis of census figures that in 1931 there were in India 6,141,000 persons engaged in cottage industries, 1,482,000 workers in large-scale industries, and 228,000 in small-scale industries.[2] Today, cottage industries employ 20,100,000 as shown in the following table:[3]

1 *Ibid*,, pp. 132 *et seq*.
2 I. L. O. Report, op. cit. p. 17.
3 India and Pakistan Year Book, 1952-53, p. 165.

Employed in Cottage Industry

Industry	Workers in millions	Industry	Workers in millions
Textile	5	Chemical products (Vegetable oil) ..	1
Leather	2.4	Food	2
Wood	2	Dress and toilet ..	1.1
Metals	4	Miscellaneous ..	0.6
Pottery, ceramics etc.	2		
Total ..	20.1		

We have already traced elsewhere the causes of this process of "de-industrialisation" as well as of the relatively retarded development of large-scale production. The artisan of the earlier days was an organic member of the village community; he owned the tools that he employed and the raw materials of his trade, which he obtained from the neighbourhood of the village or from distant sources. The village weaver was the only craftsman who broke through the circle of village self-sufficiency, and found an outlet for his products in places far away from his village. In the town, the artisans had to meet the needs of varied social groups, each with its own standard of comfort and luxury. Such craftsmen reached a high degree of skill and worksmanship.

Throughout the 19th century, British policy towards India was primarily intended to meet the needs of British manufacturers for increased supply of raw materials from India, and for increased opportunities of selling British manufactures. By 1850, India was importing more than a quarter of the total textile exports of England. As machine-made cloth affected the handloom weavers, so machine-made yarn affected the spinners. The craftsmen employed in silk and wollen goods, in the crafts of pottery and glass and paper, experienced a similar fate. The domestic industries .which once enabled even the agricultural classes to supplement their income gradually declined. By 1900, India was converted into a large-scale exporter of rice, cotton and jute, of tea and oil seeds. The network of railways constructed in the second half of the 19th century "was the most important single factor in this transformation of India into an agricultural colony of British Industry," facilitating as it did the export of raw commodities and the import into the country of British goods.

The disappearance of the old trade and crafts was not only due to the flow of commodities from abroad, but also due to the export of raw materials which once were at the disposal of the worker, either as free goods like hides and skins, or obtainable

at low prices. The patrons of some of these products of craftsmen in the shape of fine textiles and inlaid work—the wealthy townsmen and others centring round the courts of rulers and chiefs were no longer to be found. With the advent of improved facilities of trade and transport, and the breaking down of the barriers between the village and the town, there arose a class of merchants and traders who acted as middlemen and who helped in scaling down the remuneration to the workers and made it difficult for them to carry on their crafts. A new proletariat arose within the country, not a proletariat of industrial workers employed in large-scale production, but a proletariat of half-starved farmers and landless labourers.

Classification[1]

A cottage industry has been defined as "one which is carried on wholly or primarily with the help of members of the family, either as a whole or a part time occupation." This definition was suggested by the third sessions of ECAFE held at Bangkok. It has been accepted by the Fiscal Commission 1949-50.[2] The Commission define a small-scale industry as one which is operated mainly with hired labour. They observe that while cottage industries are associated with agriculture and provide whole-time occupation only in rural areas, small-scale industries generally provide whole-time occupation to their workers and are located in urban or suburban areas. No definition, however, can avoid overlapping and afford a clear line of demarcation between cottage and small-scale industries.

Cottage handicrafts and small-scale industries in India to-day may be divided into four classes : (a) peasant art and crafts

1 A variety of classifications have been suggested. Dr. Radhakamal Mukerjee in "Economic Problems of Modern India" Vol. II, 1941, has suggested the one indicated in the text. The Bombay Industrial and Economic Enquiry Committee report suggests an alternative classification. By small-scale industry the Committee mean, industries where power is used and the number of workers employed is less than 50, and capital invested is less than Rs. 30,000. It also means industries carried on in Karkhanas where the number employed exceeds nine. Cottage industries are defined as industries where no power is used and manufacture is carried on in the home of the artisan.

According to Dr. V.K R.V. Rao, small-scale industries are (1) those auxiliary to large-scale industries, e.g. roller skins, pickers, motor cushions, etc., (2) those engaged in the supply of repair services, e.g. motor repairing and other workshops, (3) those engaged in the manufacture of finished goods, e.g. brass and copperware, iron foundries, furniture, cutlery, soap-making, etc. Cottage industries are classified by him into (1) those dealing with cotton, wool and silk, spinning and weaving etc., (2) those dealing with metals, e.g. brass and copperware; (3) those dealing with wood, e g. furniture making; (4) those dealing with leather; (5) those dealing with earth, sand, etc. e.g. pottery, bricks and tiles; (6) those connected with food, e.g. canning, sweetmeat making; (7) industries such as bangle and paper making, bidi making, etc. ("Small-scale and Cottage Industries" in "Industrial Problems of Modern India," edited by P.C. Jain, 1942).

2 Report, p. 99. A more elaborate classification of cottage and small-scale industries is to be found in the Fiscal Commission Report which may help in the determination of future policy, whilst it cannot avoid overlapping and providing for categories that do not exist in practice.

carried on as subsidiary occupations by cultivators which supply their own household needs and which sometimes are intended for an extended market; (b) industries which supply the needs of the village carried on by a specialised group of workers like carpenters, blacksmiths and potters; (c) village art industries carried on by artisans with specialised skill and aiming at a standard of art which appeals to a wider market; and (d) urban arts and crafts representing superior craftsmanship many of which still survive.

(a) Crafts affording subsidiary occupation to cultivators

The cultivator in India is occupied with agricultural work for about eight months in the year, and even in the busy months his work is not continuous. Amongst the subsidiary industries still pursued by farmers may be mentioned hand spinning and weaving, flour grinding, rice pounding, basket making and sericulture. Hand spinning is by far the most important of these occupations. Handspun goods made by the villagers not only supply the needs of the family, but have sometimes a wider market beyond the locality. Weaving is likewise a familar occupation with village housewives. According to the Census Report of 1921, "there is an average of nearly one loom to every two occupied houses." The Fact Finding Committee which reported in 1942 estimated the working handlooms at two millions over the whole of India. More recently, due largely to the activities of the Congress and the All-India Spinners' Association, there has been a considerable expansion of hand spinning in the villages. The spinners are mostly the landless labourers who have no work for six months in the year and whose earnings amount to an average of Rs. 5 per month by spinning. The earnings of an average spinner varied from 6 pies to 2 annas for an 8-hour working day in the pre-war period. According to the Planning Commission, there were 3 milion handlooms in India in 1951, in addition to 23,000 power looms, which are a comparatively recent development.

Handloom Weaving

It has been said that one-third of the cloth consumed in India is produced by the handloom. This may be accounted for by the fact that apart from the specialised caste of weavers, there is a considerable proportion of the agricultural classes who take to weaving as a subsidiary occupation. In Bihar and Orissa, the handlooms supply 40 per cent of the consumption of piece-goods in the province.[1]

[1] "Economic Problems of Modern India," Vol. II, p. 5.

We reproduce below a comparative table from the Report of the Fact Finding Committee (Handloom and Mills) showing cotton yarn consumed and cloth produced both for mills and handlooms:—[1]

Cotton Yarn Consumed and Cloth Produced in Indian Mills and Handlooms

Year	Cotton Yarn consumed in mills (in million lbs.)	Cotton Cloth produced in mills (in million yards)	Yarn available to handlooms (in million lbs.)	Cloth produced on handlooms (in million yards)
1900-01	88	520.6	161.6	646.4
1905-06	145	693.1	258.3	1,033.2
1910-11	218	1,042.0	217.0	868.0
1920-21	327	1,563.1	232.8	931.2
1930-31	519	2,480.8	314.3	1,257.2
1937-38	766	3,661.5	323.3	1,293.2
1938-39	817	3,905.3	425.8	1,703.2
1950[2]	1,175	3,665	—	636 (1100)
1951	1,304	4,076	—	800 (1200)
1952	1,450	4,598	—	—

It will thus be seen that mill production of cotton cloth increased from 40 per cent of the total in 1900-01 to 70 per cent in 1938-39 whilst that of handloom declined from 60 per cent of the total in 1900-01 to 30 per cent in 1938-39 in undivided India. Today, mill production is 77 to 84 per cent of the total production in the Indian Union.

The handloom weaving industry in India is still an important industry, in fact the largest and the most widespread after agriculture. Emphasising its importance the Tariff Board (1932) observed that it provides "an occupation for the agriculturist in the season when agricultural work is slack and enables him to use his time, which would otherwise be wasted, in producing goods of a certain—even though limited—value."

In India, both the coarser and the finer qualities of goods are made by handlooms; but they are losing ground as regards the coarser varieties. During the years when the Khaddar movement stimulated the handloom industry the factories took advantage of the cry, and furnished an imitation which had a great sale.

According to the Fact Finding Committee the number of weavers is 14,34,178 whole-time and 747,654 part-time, the total being about 2.4 million. Besides these, are auxiliary workers, some paid and others unpaid, estimated at about 3.6 million,

1 Report pp. 55-6.

2 The figures from 1950 we get from "India, 1954." Of handloom production from Owen, op. cit. p. 207. The unofficial estimates for handloom production are indicated in brackets.

thus giving us a total about 6 million weavers for undivided India, for 2 million working handlooms. In addition to these there are the dependants, and assuming on an average 3 dependants for each of the 2.4 million weavers, the total number dependent on the handloom industry may be estimated at about 10 millions before Partition. The value of handloom production in India was estimated at 72.80 crores of Rupees, the value of cotton cloth being 47.10 crores, silk Rs. 14.76 crores, artificial silk Rs. 4.16 and wool Rs. 3.28 crores in 1939-40.[1]

One of the reasons why hand woven cloth is more popular than machine-woven cloth is the variety of the patterns which can be produced on the hand-made article. Moslems wear plaids which are of infinite variety while borders are common on Hindu men's and figures on Hindu women's clothing. Hand weaving supplies this demand in an endless selection of patterns. This desire for designs makes itself felt still more in the demand for silk fabrics. Each dress length is woven independently and the pattern may vary for its different parts. It is impossible to weave these economically on a power loom.[2]

In earlier days, the weavers lived in villages and worked mostly for the neighbours. In towns, many worked on their own raw materials for competitive sale in a local market. Today, the weaver has become dependent on merchants who have advanced money. They have been subjected to competition from the large-scale machine production which they have been able to meet only by increasing dependence and indebtedness. The weavers work in shops which are also their residences. Some of them erect tents in which they work, others rent a shop. A large number work at piece rate for other weavers who own houses and looms. A few employers hire out sometimes as many as 50 weavers.

Much has been done of late by Government and bodies like the Salvation Army to improve hand weaving. Attention has been given to new types of looms. The fly shuttle is now extensively employed. The Basle Mission helped in the introduction of new looms and in the production of new types of cloth. Attempts have been made to provide financial help to the weaver by co-operative financing and marketing arrangements.

In spite of all that has been said in favour of cheap factory products and of the gloomy future that faces the handloom industry, there are certain considerations which must not be lost

1 Report, p. 61.
2 Buchanan, op. cit. p. 76.

sight of in judging the future of the industry. The handloom requires small outlay. The labour supply is plentiful. It gives a subsidiary source of income to millions of the rural population, who can work in their leisure hours or in the slack season. The industry supplies a fundamental necessity of life in the shape of clothing by work at home. As far as the substitution of mill cloth by hand-woven cloth in the case of the villagers themselves is concerned, there may be some increase in the cost of the cloth, but that would be more than balanced by the additional wages provided for them by the handloom. According to the Millowners' Association, "out of every rupee representing the income of cotton mill company, wages and salaries amount to four annas." On the other hand in every rupee of khadi produced wages alone come to ten annas six pies. There are many who would welcome in this country such a re-distribution of income.[1]

Moreover it may be noted that hand weaving is not a decaying industry. In spite of its decline and the great development of the cotton textile industry, the latter employs only a seventh of the total number of workers engaged in cotton cloth production, while the remaining six-sevenths are employed in the hand-weaving industry, even after a century of competition from the mill industry. The Indian handloom industry may well be said to have clearly shown its capacity for survival.[2]

It may also be pointed out that the handloom industry does not directly compete with mill-made cloth. As the Director of Industries (Bombay), Mr. R. D. Bell, observed, "The mill industry and the handloom industry are not really antagonistic to one another. A great part of the output of the handloom is composed of specialised types of cloth which are not suitable as regards quantity for mass production. The amount of direct competition between mills and handlooms is at present restricted."

The handlooms, moreover, provide an enormous market for mill spun yarn. The provision of ample quantities of mill spun yarn of all counts and regular twists and strength, in substitution of the irregular coarse hand spun yarns of earlier days, is of great help in the revival of the industry.

1 So long as the mill industry is not scrapped this seems to be a remote possibility. Such a proposal is far beyond the financial resources of a State that would have to compensate the present owners of the mills and to find additional amounts for loans to the weavers for the purchase of yarn, which is also evidently to be handspun.

2 Fact Finding Committee Report, p. 201.

The success which has attended the efforts of the All-India Spinners' Association established under the inspiration of Gandhiji suggests that there is a definite and secured place not only for hand-weaving, but even hand-spinning in our economy. According to the reports of the All-India Spinners' Association, the Khaddar—hand-spun and hand-woven cloth—industry has made good progress. In 1924, the Association was responsible for producing Khaddar worth 9½ lakhs of rupees which rose to Rs. 25 lakhs in 1925, Rs. 31½ lakhs in 1928-29, and Rs. 54 lakhs in 1929-30. In 1930-31 it reached the peak of 72 lakhs of rupees and then fell to 32 lakhs worth in 1935. In 1935 the All-India Spinners' Association accepted the principle of a fair wage for the spinners, and decided that a spinner should get at least one anna per hour of spinning. Spinners were willing to work for much less; for whatever they could earn, be it even a pice, was welcome to them, so great was their poverty and want.

The introduction of fair wage made khadi dearer, due to higher cost of production and production had to be curtailed. The outbreak of war gave a fillip to khadi production, and even under the fair wage system the production expanded. In 1941-42 khadi worth Rs. 1.2 crores was produced, the highest production being reached in 1944-45 with khadi worth Rs. 1.34 crores. In 1941-42 certified khadi of 1,60,00,000 square yards valued at Rs. 91 lakhs was produced in 15,000 villages providing employment to 325.000 part-time spinners, 25,000 women and 5,000 other artisans. In 1950-51 the wages distributed to spinners and weavers amounted to about Rs. 66 lakhs and in addition about Rs. 7 lakhs were distributed to other labourers.[1] These figures refer to khaddar certified by the All-India Spinners' Association; but apart from this there is a considerable production of khaddar not certified, for which figures are not available. The All-India Khadi Board gives us the following figures for the value of khadi produced by handloom weavers and sales of khadi for the last two years.[2]

Value of Khadi Production and Sales

	Production (in 000 Rs.)	Sales (in 000 Rs.)
1952	70,96	1,38,10
1953	1,35,97	1,52,01

With the outbreak of the second world war and the subsequent rise in the price of mill-made cloth and its scarcity, the

1 "Planning for Full Employment," op. cit. p. 26.
2 *Ibid.*, p. 28.

demand for hand-woven cloth increased. The rise in the price of khaddar had not reached the same high level as that of mill-made cloth. The hand-loom weavers had been through their worst period. But in the post-war period, with increasing supplies of mill-made cloth and the relative rise in price of hand-loom cloth, a new period of depression in handloom weaving has appeared. There was a severe crisis in 1949. The development of hydro-electric schemes throughout the country opens out further possibilities for the revival of the industry. The weavers can well stand the competition of the mills, if they can adapt themselves to the new conditions, and acquire the ability to work electric power looms in their own cottages.

As we have observed, the weaver may find it possible to compete both with the indigenous mills and the foreign imports. In the finer qualities of cloth, which are meant for the wealthier classes and which cater to individual tastes, the position of the handloom weaver has been said to be impregnable. In the very coarse varieties of cloth, in which the cost of production is nearly equal to the cost of raw material, the mills will not find it easy to dislodge the handloom worker. When the market conditions are not favourable to the handloom weaver, the mills may come into the field against the hand workers who cannot reduce cost. In cloth of medium counts, the mills have the field all to themselves. During recent years, the mill industry has been protected by duties on yarn and cloth. In 1932, the Tariff Board held that in spite of the growing demand of the spinning mills for protection, the duties on yarns of low and fine counts would adversely affect the handloom weaver in his unequal contest with the mills. The Indian National Congress endeavoured to bring the mills to an agreement not to produce the coarser varieties of cloth. These agreements have been often broken, and there have been proposals for legislating on the issue in the interests of the handloom weaver.

The Government of India spent a sum of Rs. 25 lakhs during 1934-39 to improve handloom weaving, a sum very poor indeed as compared with the importance of the industry. Provincial schemes were concerned with the supply of appliances on a hire-purchase system, of raw materials at reasonable rate, with advice to weavers in finishing, production of marketable patterns, and with educating weavers in finishing, dyeing and printing processes. These are the problems that face the industry. There are other problems which have not yet been tackled—there is the

want of organisation; there are a host of middlemen who make huge profits on the sale of yarn to the weavers and in the purchase of cloth from the weavers. There are malpractices in the yarn trade and the percentage of the middlemen's profits ranges upto 47. The Government of India has been taking keen interest in the handloom industry which is the largest and most widespread subsidiary industry. The problem that faces the country is to safeguard the handloom industry and reconcile the conflicting interests of the handloom and mill industry.

The Government of India established in 1953 an All-India Khadi and Village Industries Board, pursuant to the recommendations of the Planning Commission. The Board is to be responsible for preparing programmes for the production and development of khadi and village industries, for the training of personnel and the supply of raw materials, marketing and research. A khadi fund has been created by Government from which grants and loans are to be made for financing, in whole or in part, the khadi industry. The first step taken by the Board was to demarcate the country into seven zones with a director in charge of each zone, to co-ordinate the activities of organisations engaged in the development of village industries in the zone. The Government have placed funds at the disposal of the Board for granting loans and subsidies. The total amount utilised during 1953 was Rs. 1.43 crores. For 1954, the actual provision is an expenditure on grants of Rs. 1.76 crores and loans of Rs. 2 crores. A cess of 3 pies per yard on all mill cloth, excepting that produced for export, has been imposed to provide finance for the development of handloom and khadi industries. The production of dhotis and saris by textile mills has also been restricted in order to allow greater scope for the development of the handloom industry. Fourteen States have submitted schemes to the Khadi Board during the current year involving an outlay of Rs. 7 crores over a number of years. The proceeds from the cess are expected to be Rs. 4 crores a year.

The cut of 40 per cent in the production of dhotis and saris by the mills, it has been said, will involve a serious shortage in the supply as it had been repeatedly shown in the past that the handloom industry is unable to produce the required quantity of dhotis and saries. In 1951 to meet such a shortage, Government had been compelled to direct the mills to reserve 50 per cent of its looms for the manufacture of dhotis and saries. The Bombay State mills alone produced in 1953, 755 million yards of dhotis and

saris mostly worn by the agricultural and working classes on account of their low prices. It is, therefore, urged that apart from losses to the mill industry, the consumer will have to bear the main burden of higher prices.[1] Under the Five Year Plan handloom production is scheduled to increase from 810 million yards in 1950-51 to 1,700 million yards in 1955-56.

The primary consideration, when all has been said and done, that should govern the problem of handloom industry along with all other small-scale industries, is the consideration of unemployment in the light of our growing population. We are primarily an agricultural country, with 80 per cent. of our total population living in villages, with an immense amount of disguised unemployment. The cultivator, moreover, is free for more than half the year. The future depends largely upon finding employment for the partially employed or the totally unemployed; and the development of cottage industries, like the handloom industry, with Government help in the purchase of raw material and sale of the finished product even to the extent of subsidising the sale, might well be regarded as a statesmanlike measure.[2]

Well might Ganhiji have called the charkha the second lung of the nation! It is interesting to note what the Oxford economist G. D. H. Cole observed in this connection: "Gandhi's campaign for the development of the home made cloth industry —khaddar—is no mere fad of a romantic eager to revive the past, but a practical attempt to relieve the poverty and uplift the standard of the Indian villager."[3]

Other Cottage Industries Subsidiary to Agriculture

If we leave aside hand-spinning and weaving, the cultivators show skill in industries like basket making, cane work, rope making and weaving of blankets.

1 Cf. M. P. Gandhi (Handloom Weaving Industry—1952-53 annual). The total value of dhotis and sarees comes roughly to Rs. 120 crores. According to Mr. Gandhi, the handloom product generally costs about one-third more than the corresponding mill product. Hence the consumer will be required to pay Rs 40 crores more for these dhotis and sarees. Apart from this direct burden, the Central exchequer will lose about Rs. 35 crores on account of the loss of excise duty and income-tax. This shortfall in revenue will again fall on the consumer. In other words, the reservation will impose a new burden of Rs. 75 crores on the consumer.

2 A Committee has been appointed by the Central Government to review the entire subject of protection for the handloom industry in relation to the mill industry.

3 "A Guide to Modern Politics," 1934, p. 290. This is true so long as khaddar is produced in the villages and sold in urban areas. The A.I.S.A. made it compulsory for wearers of khaddar to spin. Khaddar, during the war years, was only available to those who spun. This was a source of trouble to urban people who could hardly find the time to spin. The idea of compulsory spinning was subsequently given up. To encourage the use of khaddar Government have issued circulars advising all Government servants to put on khaddar.

There has been a certain amount of specialisation and localisation in regard to these occupations. Basket weaving has been localised in Benares and Allahabad districts, the abundance of palms in Malabar and Eastern Bengal has favoured skill in wicker work and mat making amongst the cultivators. Bamboo mats made in Assam are used in roofing country boats and jute godowns in Bengal. Silk worms are reared and silk cloth woven in Assam, Bengal, Mysore and Kashmir.

(b) Village Subsistence Industries

There are cottage industries which are in the hands of industrialists who have nothing to do with agriculture. The village craftsmen include the blacksmith, the carpenter, the weaver, the tanner and potter who also supply the needs of the village, and are still remunerated by shares of grain. The goldsmith is found only in the richer villages. Sometimes craftsmen cater for a group of villages by regular visits in turn, and by offering their services and wares at the weekly markets. The classes that combine some form of subsidiary occupation with agriculture are not confined to spinners and weavers. Artisans like the carpenter and the blacksmith, the potter and oil-presser, have frequently a plot of land to cultivate. So much has been written about the self-sufficient character of the village in early days that it seems platitudinous to deal with the subject. The village contained almost all the elements necessary for a complete community life. The arts and crafts in the village satisfied the needs of the village. Local carpenters made the ploughs, local blacksmiths their shears, local potters supplied the utensils for cooking or for water. They received a payment for their services fixed by custom, mostly a share of the harvest.

Things have rapidly changed during the last few decades. The more ambitious among the artisans are drawn to towns to add to their income. Labour has become more mobile. The village artisans have been faced with the mass production of factories. Vessels of iron, brass and copper, made outside his village, are increasingly within the reach of all classes in the village. On the other hand, the craftsmen are adapting themselves to the altered conditions. There are commodities made by them which are still in large demand. They work with better raw materials, in some cases with better tools. "The weaver has taken to mill yarn, the dyer to synthetic dyes, the brazier and coppersmith to sheet metal, the blacksmith to iron rolled into convenient sections, in each case with advantage to

himself from the lessened cost of production which has greatly extended his market."[1]

(c) Village Art Industries

In many parts of India, the villages have been the centres for the production of goods that have artistic value. In Bengal, Kashmir and Mysore, where the mulberry trees grow in abundance, sericulture and the silk industry have flourished. Carpet weaving is associated with villages in Mirzapur and Banaras. Metal work is familiar in parts of Bihar and Bengal. Glass bangles made in U.P. are exported to Persia and Arabia, and embroidered cloths woven in the villages of Bengal have a market in Afghanistan, Turkey and Persia. The manufacture of shawls in Kashmir has acquired a reputation in markets far across the seas in Europe and America. The potters' industry not only supplies vessels and dishes of daily use, but keeps busy a large number of villagers in the making of toys and images. These industries are largely linked up with the prosperity of agriculture, and any measures that are effective in the improvement of agricultural conditions will give a new lease of life to these village industries. As elsewhere, owing to lack of market facilities, the cottage artisan has found himself increasingly dependent on the middlemen, who supply the raw materials and purchase the finished commodity.

(d) Urban Arts and Crafts

The towns in India have from early days been the centres of handicrafts, which have enjoyed a wider market, and are connected with a number of products involving specialised workmanship. "The patronage of the nobility, the desire for luxuries among an ease-loving public, the religious obligation to purchase particular varieties of goods, the hereditary skill and dexterity of particular castes or groups of artisans—all these have contributed to the development of handicrafts and industries of luxury."[2] Amongst these arts may be included embroidery and brocades, gold plated thread, carpets and shawls. The economic status of these artisans has been gradually deteriorating; they have come under the grip of the middlemen. They have to struggle against the difficulties arising from the supply of raw materials. The better quality hides and wool are bought by exporters and the artisan has to pay a higher price for such materials as he requires, which means a reduction in his own remuneration. Not only do the middlemen supply the raw materials, they are also purchasers of the finished

1 Report of the Industrial Commission, pp. 10 and 162.
2 R. Mukerjee, op. cit. p. 12.

goods. They advance money to the artisans for the supply of raw materials and take over the finished product. Often the middlemen themselves are artisans who employ fellow-craftsmen on wages, as in the weaving, the gold thread and metal industries. The total capital invested by middlemen in silk weaving in Banaras alone was estimated at Rs. 2 crores. These middlemen in turn work with borrowed capital at high rates of interest.

Difficulties of Cottage Industries

The wages received by the craftsmen are in many cases inadequate, and their difficulties are added to by trade depressions, by fluctuations and changes in demand, by competition with foreign products and by sudden alterations in tastes. The great difficulty felt by the artisans is associated with the purchase of raw materials. They receive no help from banks, not much from co-operative societies. They have no assets and they can offer no security. They inevitably pass into the grip of the middlemen, who are very often themselves entrepreneurs employing the sweated labour of the artisans for their own advancement. The artisans with their low wages have added of late to the numbers of the proletariat.

In Western countries, the co-operative system as well as trading organisations have substantially helped in the protection of small arts and crafts. Co-operative societies in India have mostly confined their activities to the supply of rural credit and other needs of the agricultural population. And yet, unless the co-operative movement comes to the help of artisans, there does not seem to be reasonable hope for the revival and stabilisation of cottage industries in India. The successful working of the co-operative movement depends upon the financial resources available to it. These resources can come only through the banks or through a Government guarantee of such loans as the co-operative societies may find it necessary to raise.

The work of organising co-operatives of craftsmen is a responsibility of the industries departments in the States with the assistance, if necessary, of the co-operative departments. Some progress has already been made, e.g. the number of industrial co-operatives in all the States rose from 3,758 in 1949 to 5,035 in 1950 and, according to current schemes of Governments, it is expected to rise to about 8,000 in 1956. But all these co-operatives are not concerned with handicrafts and their total membership is less than a million.[1]

1 First Five Year Plan, p. 328.

In the second place, the success of the movement will depend upon the extent of organisation among the workers belonging to each craft. Such organisation is at present largely absent. Lastly, the part that the State should play in the revival of cottage crafts should never be forgotten.[1] Research aided by State funds in the tools and technique of the arts, educational institutions in the arts maintained and run with the help of public funds, the maintenance of an intelligence department for the spread of information with regard to marketing, direct assistance to co-operative societies for supply of raw materials and purchase of finished products—these are primary and urgent calls on public policy in a country where the lives and well-being of millions hang in the balance.

The Case for Cottage and Small-Scale Industries

The question has been often raised if, in an age of machinery and large-scale production, it is desirable to maintain the small producer against the factory. There are people who tell us that cottage industries must sooner or later disappear, and that handicrafts involve a wastage of labour and a higher cost to the consumer.[2] These advocates of large-scale of production fail to take account of the fact that machinery increasingly displaces labour, and that with the drive towards economic self-sufficiency, protective policies and the industrialisation of countries regarded as economically backward, a saturation point has been reached which places limitations upon an indefinte expansion of large-scale enterprise. With growing industrialisation in India, there will be a growing need for finding sources of employment for those who are displaced by the use of machinery.

1 The Bombay Industrial and Economic Enquiry Committee Report divided under six heads the handicaps under which cottage and small-scale industries suffer: (1) raw materials, (2) technique of manufacture, (3) finance, (4) marketing, (5) taxation and (6) other difficulties They particularly emphasised the competition of the larger producers and lack of finance as factors hampering our artisans and cottage workers. As regards the cottage industries, they recommended the organisation of the cottage workers into associations to secure them the benefits of large-scale of organisation. But "this kind of organisation, however, we are convinced cannot be expected to spring spontaneously out of the endeavours of the artisan classes," due to their ignorance, illiteracy, conservativness, and the grip of the middlemen over them. According to the report, state help and initiative of substantial type over a long period are absolutely necessary, and they also opined that state management is equally necessary. They recommended the formation of a Provincial Cottage Industries Research Institute, the formulation and execution of a stores purchase policy with a cottage bias, the holding of periodic exhibitions and the creation of permanent museums, and an agency to finance cottage industries. With reference to small-scale industries, the Committee recommended that the Provincial Government should help to start a Small Industries Bank with a capital of Rs 25 lakhs and active state help in all matters especially technical. (Report, pp. 94 *et seq* and 158 *et seq.*) Some of the State Governments have already established State Finance Corporations to promote small-scale industries.

2 It has been estimated that cost of production of cottage industries would be higher by 20 p. c. to 30 p.c. due to the labour ratio of 1:10.

3 *The New Republic*, 6th May, 1940.

The possibility of improving the methods of handicrafts and domestic industries should never be lost sight of. It is not correct to assume that because mass production is the condition of efficiency in some industries, it is equally desirable in all. This mistake was made in many parts of Europe and is now being corrected in part. It would be wrong to ignore the possibilities of our traditional economic organisation. Wisdom would lie in the direction of helping these small producers by improving their technique and strengthening the financial organisation of their industries.

The problem of "technological unemployment" is becoming more and more acute today even in the West. The new inventions rapidly displace human labour which finds increasing difficulty in obtaining new employment. Thus, for example, the introduction of the 'continuous hot-strip mill', in the steel industry in the 27 mills of Pittsburg since 1926 has thrown out 100,000 workers. Under the old system, 125,000 steel workers were required for an output of 15,000,000 tons of steel, while now 15,000 men produce 14,000,000 tons of steel in the new hot-strip mills.[1] As Mr. Philip Murray, the Chairman of the Steel Workers' Organising Committee, says, "The continuous automatic steel strip enables 126 men to do the work previously performed by 4,512."[2] Every new automatic machine, every new photo-electric cell, every new invention displaces human labour on a scale that creates its own problem. In large-scale enterprises and in established industries, the latest technical processes are applied and old processes are replaced by new ones, thus creating a new problem of "technologically fired" labourers. Modern science is fast progressing towards "push-button" production which would make almost all labour redundant. It would thus appear that the greater the extent to which large-scale production is developed, the greater the need for the development of a large number of small-scale industries into which the technologically unemployed can be absorbed. In a planned society, where work is found for all able-bodied men and women, such small-scale industries may give ample scope to the craftsmen for expressing their invididuality by embodying their own designs and conceptions in the commodities they produce.

Apart from this, there are other considerations of a vital character which favour small-scale industries distributed over

1 Stuart Chase, "The Twilight of Communism in the U. S. A.," in *Readers' Digest*, September, 1941.

2 *The New Republic*, 6th May 1940.

the country side. The heavy concentration of industries in a few cities or areas of the country is not desirable from the point of view of equitable regional distribution of the industries. As the nations of the world still continue to live in the same "state of nature" as they have done in the past, it may be desirable to distribute the industries all over the country to escape concentrated aerial attacks which might otherwise cripple the fighting capacity of the country by destroying its basic industries. The West shows signs of disillusionment with modern large-scale industries and their attendant evils. We might well absorb the lessons which Western experience teaches us and in our planning be prepared to give up some of the external and internal economies of large-scale production so that we may be saved from these evils. Further, we must not forget that the development of large-scale enterprise by itself does not lead to maximisation of human or even economic welfare.[1]

The assured place that cottage industries are bound to have in our planned economy is revealed by the success achieved by the All-India Village Industries Association established in 1934 under the inspiration of Gandhiji. "The Association fixed on a minimum wage, organised exhibitions and museums to demonstrate the possibilities of persons taking to village industries, carried on propaganda to make the village people conscious, and develop their economic thought along decentralisation of industries."[2] On the advent of the Congress Ministries in 1937, some schemes were tried out with varying degrees of Government aid and some surveys and economic plans were undertaken. The Association is also carrying on the work of Village Uplift and Rural Welfare. Industries like paddy husking and flour grinding, oil pressing, gur making bee keeping, paper making, soap making, tanning and leather work, coir spinning and weaving, mat and basket making, slate-pencil manufacture, etc., have been encouraged with varying degrees of success in suitable villages. In 1935, the Gram Sevak Vidyalaya was started to train students in various village industries and rural social work.

Apart from the establishment of the All-India Khadi and

1 The special appeal addressed to Gandhiji at the time of the Second Round Table Conference by a disillusioned American has an interest of its own. "This is particularly appropriate moment, it seems to me, for you to be visiting London, because apart from the political questions, it seems to me to be a time when the Western world is disuillusioned in regard to machinery in general, in regard to mass production system we have built up in Germany and America in particular; and people are feeling somewhat bewildered and doubtful as to their value and asking themselves whether we have not, after all, overdone it." (Quoted by L. C. Jain in "The Working of the Protective Tariff in India," 1941, p. 65).

2 All-India Village Industries' Association Report, 1941, p. 1.

Village Industries Board, to which we have referred before, the Government of India have decided to develop the following cottage industries: Sports goods, tanning, carpentry and wood working, brush manufacture, pottery and toys. Preference is given to products of cottage and small-scale units for store purchases for the Central Government. The products of these industries are to be displayed in the offices of our Trade Commissioners abroad, and exports are to be stimulated. State Governments are to be encouraged to build up co-operative societies. The Planning Commission have drawn up a detailed programme for the development of 12 industries, including oil-pressing, soap making, paddy husking, gur and khandsari, hand-made paper, blankets and the coir industry, and made a provision of Rs. 27 crores for the same.

We may not agree entirely with those if there are any such, who advocate a return to the simple life of a remote age and who would scrap all machinery and large-scale production. We recognise, however, that large-scale production has under our present distributive machinery brought with it unemployment on an unprecedented scale and has degraded or has a tendency to degrade, human labour to the level of the machine. The existence of cottage industries and handicrafts side by side with factory industries may not only absorb the population displaced by machines, but save them from degradation which idleness supported by unemployment doles usually involves.[1]

A survey of the present position of small industries in various countries would bring out the fact that they form an organic part and have a place in the economic organisation of every country. The imposingly rapid growth of large industry, "electric power and the steam engine, the demands for cheap goods of uniform pattern, capitalist power and the juggernaut of modern labour policy crushing individualism under its huge wheels of insistence upon collective fighting with an ever mobilised army, which grudges individual workers their freedom—these have wrought sad havoc in this once fruitful field of human industry."

It would appear that even in England, the employment of workers in their own homes or in workshops under small masters still survives. Charles Booth gives us a vivid picture of the

1 Because we are pleading for a place for small-scale and cottage industries, we must not be understood to deny the necessity for large-scale modern industries. It is impossible and it would not be wise to go against the tide and to neglect large-scale industry. Our economic structure should secure a proper integration of cottage industries with large-scale methods of production.

conditions under which industries like tailoring and shoe making at White Chapel, and silk weaving at Bethnal Green, are carried on. Cutlery in Sheffield, lace making and hosiery in Nottingham, straw plaiting in Bedford, the glove industry in Worcester, are all small-scale industries still carrying on in the midst of a factory-ridden environment. In Japan, the cottage workers in a variety of crafts have found a medium for creative expression.[1]

There is another consideration to be kept in mind when we are discussing the place of small-scale industries in India. Due to shortage of capital the output per worker varies with the amount of capital equipment available.

The following table illustrates the truth of the statement in the cotton weaving in India :[2]

Cotton Weaving in India

Degree of Capital Intensity	Capital investment per worker Rs.	Output per worker Rs.	Ratio of output	Amount of labour employed per unit of capital
Modern mill (large-scale industry)	1,200	650	1.9	1
Power loom (small-scale industry)	300	200	1.5	4
Automatic loom (cottage industry)	90	80	1.1	13
Handloom (cottage industry)	35	45	0.8	34

Assuming that our main objective is to improve living standards of the population by raising the efficiency of the worker, it would appear to be a far sounder policy to centre our resources on the small-scale production (which is labour intensive) by providing facilities in the shape of raw materials and marketing than in the endeavour to raise enormous amounts of capital for the establishment of large-scale industries which by economising labour may add to unemployment and aggravate depression.

The prospects of a successful development of village industries in India on economic lines are fairly promising. There are enormous resources in this country for the development of cheap electric power which could be utilised for small-scale production in villages. The Indian artisan, though he has been charged with

1 It is interesting in this connection to call attention to the Fiscal Commission Report (1949-50): "It is the relative strength of modernised cottage and small-scale industries that accounts for the larger place that these latter have always occupied in the economy of even such industrially advanced countries of the world as the U.S.A., the U. K., Germany and Japan. As this position is not always fully realised, we give some particulars about the extent of such industries in some of these countries.........there were about 3,800,000 industrial establishments in the U. S. A. with 1-4 workers. A recent estimate is that "small business makes up 92.5 per cent of U. S. business establishments, employs 45 per cent of the country's workers, and handles 34 per cent of its volume of business".... In the U. K. according to an official estimate, units employing between 5 and 30 persons accounted for 29 per cent of the employment, and 19 per cent of the outputs." p. 101.

2 P. S. Lokanathan, "Cottage Industries and the Plan," in *Eastern Economist*, 23 July, 1943 quoted in I.L.O. Report, op. cit. p. 15.

following routine methods of work inherited through generations, is always ready to learn and adopt better methods when he is convinced about their practicability. The cultivator who grew sugarcane, and once used the inefficient wooden mills, has readily taken to the use of cast iron mills, which involve less labour and yield a larger percentage of juice. Wood workers and metal workers have taken to European tools; oil extraction is largely done in screw presses. Every tailor's shop in the village has a sewing machine. There are evidences of a healthy spirit of adaptability to new conditions. The close and heated atmosphere of factory life, its overcrowded slums, and its hard work and discipline have no attraction for the village craftsman. He is a cultivator by tradition and temperament. If he migrates to the town he does so out of sheer necessity. The cleavage in family life caused by migration may even have a bearing on the so-called inefficiency of individual labour. "Culture and refinement come to the artisan through his work amidst his kith and kin."[1]

On the other side, if the artistic tastes of the population are again fostered through stress laid on the aesthetic side of human life in our schools and colleges, we may lay the foundations for a steady demand for a large variety of hand-made goods which give scope for self-expression to the men who make them.

Forty years ago, in the last edition of one of his books, Prince Kropotkin pointed out how, scattered throughout Great Britain, France, Switzerland and Germany there were to be found small industries and petty trades, workers in wood, in metals, in bone, basket makers and cutlers who brought the workshop into fields and gardens and carried on their business, not for the sake of large profits, but for the satisfaction of human wants. The geographical distribution of industries in a given country is determined to a large extent by a complex of natural conditions. The banks of a river are appropriate for ship-building yards, and must be surrounded by a variety of factories. Industries will always find some advantages in being grouped according to the natural features of separate regions. But as a matter of fact, historical causes have very often determined the growth and distribution of industries, and with the increased facilities for transport and power production made available, there is no reason why civilised nations should persist in the concentration of industries in large towns.

We are still in the early stages of industrialisation. We have

1 R. Mukerjee, "Foundations of Indian Economics," p. 326.

not yet become fully enmeshed in capitalistic trusts and combines. The Indian craftsmen are heirs to a tradition and training transmitted through the ages. Their environment has an unbroken continuity of culture. Those who maintain that, with the growth of industrialisation there is no room for the village craftsmen and for the cottage industries of the earlier days, in their eagerness to imitate the institutions of Western industrialism are not alive to the reactions which this industrialism has brought with it. The case for cottage industries has been often pleaded on the ground, not only that they give opportunities for creative work to those that are engaged in them, but that they guarantee that happiness thus found in the full exercise of a many-sided human life that is not based on the misery of others.

The point, however, is that even on strictly economic grounds, the case for a greater emphasis on relatively small-scale production is stronger in India than elsewhere, just because of the relative cheapness of labour as compared with capital. If India has to remain a primarily agricultural country, the majority of our people must continue to live in the villages. This simple consideration also reinforces the case for the encouragement of a wide variety of cottage industries catering, more or less, for local needs. The question ultimately is one of research. Given a clear understanding of the problem, it would certainly not be beyond the wit of man to devise means and methods, by which the efficiency of even small-scale production can be increased and cost of production correspondingly reduced. A State Research Department, such as the Government of India has recently established, dealing mainly with the technical and economic problems relating to cottage industries, should be able to help greatly in the matter.[1]

We have put up a plea for a place in our economic life for small-scale and cottage industries. Let it not be assumed, however, that the problem of reconciling the conflicting claims of large-scale industries with those of small-scale industries, even in an integrated plan, admits of an easy solution. No human institutions or devices are free from imperfections, and the problem we are considering is only one of a host of others which humanity in the years to come will have to face in the never ending task of adjusting the claims of group with group, so as to make a closer approach to a social order in which all conflicts will be ended and a larger and richer life made possible for all.

1 The very important role of cottage and small-scale industries in the national economy has been recognised by our Government in their Industrial Policy Statement of 1948.

CHAPTER XXIX

THE FUTURE OF INDUSTRIALISM

The phenomenal poverty of the people of India and the richness of her potential resources are facts which have been universally admitted by writers both in the East and in the West. A British writer in an article in the "Quarterly Review" of April, 1917, observed: "It is a matter of common knowledge that the standard of life in India is undesirably low; while the masses of the people are provided with the necessities of a bare existence, they are in far too many cases badly clothed, badly doctored and badly fed, often overworked and often underfed; and that the present income of the country, even if it were equitably distributed, would not suffice to provide the population with even the most indispensable elements of life." These words are true even to-day after over a quarter of a century. This fundamental fact of poverty raises the question whether the condition of the population cannot be improved by adopting a different system of production. The cure for poverty was naturally looked for in an intensified industrial development since early days by economists and leaders of thought who had before their minds the example of the very country which ruled over them—a country that was able to support by industrialisation a growing population on a rising standard of comfort all throughout the last century. Shall India follow the example of Great Britain and through a policy of industrialisation achieve a higher standard of comfort for its teeming millions?

Agriculture versus Industry

The phenomenal rise of Japan as a highly industrialised country, the success of the Five Year Plans in Soviet Russia which transformed the backward agriculturist Russia of the Czars into a modern highly industrialised nation within the short space of two decades, and above all the colossal advance in material prosperity in U.S.A. through industrialisation—all these facts contributed to the growth of the belief that India's solution to the problem of poverty lay in pursuing a policy of industrialisation on the Western model.

Till recent times British economic thought endorsed the view that India was a predominantly agricultural country, and that whatever prospects exist for industrial development in the future, for a long time to come the bulk of the national wealth

of India must continue to be derived from the land. Economists, like Keynes and Dr. Vera Anstey, asked if it was advisable for India to take to industrialisation in view of competition from countries with specialised technique and efficiency. As late as 1941 Dr. Vera Anstey warned against large-scale industrialisation and intensification of production which would, according to her, merely increase the profits of a small section of the people at the expense of the masses.[1] Conditions since then have changed tremendously. Rethinking on the part of economists, as a result of the impact of the great depression of 1929, and the realisation of the outmoded character of 19th Century free trade principles and the so-called international division of labour, has brought about a welcome change in academic opinion among Western economists in favour of the need for industrialisation in underdeveloped countries like India. As Dr. Ropke observed: "It should be clear, however, that any existing scheme of international division of labour is only the historically determined result of a constantly changing combination of factors.. . . . Consequently, it would surely be wrong today to use the pre-war scheme of international division of labour as a criterion by which to judge the present industrialisation of new countries."[2] So also Prof. Frankel in an article in the Economic Journal: "Unless the raw-material-producing countries are industrialised, and the standard of living of their population is raised, no new division of labour between Great Britain and these countries will be possible."[3] The success of Japan in world markets against advanced countries like Britain was attributed, not to differences in cost of labour, but to the fact that Japan understood how to satisfy the world's demand for cheap cloth—in other words, "to the low purchasing power of the population in the European colonies and semi-colonies."[4] In the same connection Dr. Rosenstein-Rodan: "The aim of industrialisation in international depressed areas is to produce a structural equilibrium in the World Economy by creating productive employment for the agrarian excess population."[5]

Similarly Dr. Vera Anstey, who warned India against industrialisation in 1941, has been impressed by the fact that "the experiences and developments of world war the second have brought about such rapid change and such a fundamentally different

1 O'malley, op. cit., pp. 292-293.

2 W. Ropke, "International Economic Disintegration," 1942, p. 175.

3 "Industrialisation of Agricultural Countries" in *Economic Journal*, June-September, 1943, p. 191.

4 *Ibid.*, p. 189.

5 "Industrialisation of Eastern and South Eastern Europe," *ibid.*, p. 210.

economic situation that an opportunity has thereby been created for a break with the past and for economic reconstruction on a scale that would otherwise have been inconceivable." In a review of our first edition (1943), in which we quoted and criticised her views, she says: "In view of their references, on various occasions, to supposed differences of opinion between myself and themselves, I was astonished to discover to how great an extent I agree with their conclusions and recommendations. They plead in general, and in specific instances, for social control and a plan of economic development involving a substantial and rapid increase in industrial activity, in the form of both small and large-scale industries of many descriptions. I fully agree and consider that, given a "plan," rapid industrialisation is feasible and, if combined with social and economic improvements in other spheres, might well result in a substantial improvement in the general standard of life."[1]

In the light of this belated, though, welcome change in economic opinion in the West, it is not necessary to elaborate the arguments for industrialisation that we used in earlier editions. Industrialisation does not imply neglect of agriculture, but improvement of agriculture as we have all along maintained. Agriculture and industry have to be regarded as complementary in the economic development of a country rather than conflicting with each other. Both are interdependent. The extreme view regarding either has to be avoided—that the only way to make a country prosperous is large-scale industrialisation at any cost or that a rise in the standard of living is possible without substantial industrialisation. As Dr. Staley observes: "It is unreal to think of 'agricultural development' and 'industrialisation' as separate or conflicting in long term programmes. Industrialisation is inseparable from substantial sustained economic development, because it is both a *consequence* of higher incomes (people spending more on manufactured goods and services and relatively less on food) and a *means* to higher productivity (enabling agricultural efficiency to rise by shifting some people out of agriculture, especially where there is rural over-population stimulating innovations and in other ways.)"[2]

The Report of the U. N. discusses the problem of industry and agriculture in under-developed countries and points out that in countries where there is a large surplus population on land a

1 *Economica*, February, 1946, p. 70.
2 "The Future of Underdeveloped Countries," Eugene Staley, 1954, pp. 303-04.

programme of agricultural improvement is possible only by the development of manufacturing industry which would absorb this surplus. "In some under-developed countries, especially in Asia, the development of manufacturing industry is, for this reason, apart from others, of the highest priority."[1] Will it be possible for a country like ours, with a huge surplus population on land, to improve the standard of living of the population as a whole, by a planned policy aimed at absorbing the surplus in industrial development? Or shall we by such a policy raise new problems in the shape of a new type of unemployment of those millions hitherto dependent on handicrafts?

Industrialisation

There is not much room for doubt, so far as India is concerned, that industrialisation offers large prospects of raising the appallingly low standards of living of the people. But this industrialisation need not be of that aggressive imperialistic type which has been associated with some of the Westerm countries, which have sought a monopoly market in their dependencies and possessions by an exchange of finished goods for raw materials. It will be of a healthier type, developed and fostered with the sole object of giving to her people the means of healthy living and the leisure and opportunities for the play of a creative intelligence, which machinery makes possible, with no desire for capturing foreign markets or offering goods to other countries out of a surplus produced for dumping, but aiming at a relative economic self-sufficiency.

In advocating a policy of industrialisation, we have in mind the fact that India is well-situated as regards natural resources. Our large area and plentiful supplies of raw materials of all kinds render us potentially capable of developing a balanced economy like that of the U.S.A. We are capable of becoming self-sufficing as regards foodstuffs and industrial products with an immense home market for our manufactures. Already our country is tending to self-sufficiency in the matter of cotton piece-goods, iron and steel, matches, cement and sugar. So also in paper manufacture, glass, soap and other articles, we may soon be able to satisfy the internal demand. The fear has been expressed that the industrialisation of India would bring about a decline in Great Britain's share in the Indian market. Those who take this view are needlessly over-anxious. India's imports con-

1 "Measures for the Economic Development of Under-developed Countries," U. N., May 1951, p. 59.

sist chiefly of high quality goods including machinery, plant, instruments and chemicals. And it will take some time before India will be able to produce all these high quality goods. Moreover, industrialisation will be accompanied by the creation of new needs and new demands. Any rise in the standard of life amongst the millions of India would involve an increasing demand for the comforts and luxuries of civilised life.

There are still other considerations which makes a fear of this kind extremely unfounded. The process of industrialisation involves the accumulation of capital. The savings which make such accumulation possible cannot be built up all in a day. The supersession of industrial Britain by an industrialised India will have to be a slow process; if it is accelerated by the loan of capital from the West, the interest charges will provide additional expenditure by the recipients of the income. Growing industrialisation also means growing dependence on other countries for raw materials not available at home. "Given an expanding volume of production, a rising standard of life, and the existence of local differences of costs and productive possibilities,"[1] international trade is capable of indefinite expansion.

In India industrialisation is in its infancy. In no country of the world has it been more than a century old except in England. Germany was by 1900 one of the greatest of industrial nations but her elevation to that position took less than a single life time. Japan modernised her industrial organisation in less than a generation. In India, we have to face the poverty of our agricultural population, a social environment set in the mould of the past and not easy to change, exchange difficulties, and the exploitation of our mines and plantations by foreign capital. Indian capitalism may be in process of development but is by no means an improvement on the imported capitalism. Our banks are still dominated by foreign interests. What is surprising is not that industrialism should have developed by slow stages as that it should have developed at all. The question that concerns us at this juncture is: is it possible to direct and control industrialisation based on power and machinery in the general interests of our people as a whole?

The growth of large-scale production and capitalism in India has been marked by features which may to some extent be said

1 Hubbard, "Eastern Industrialisation and its Effects on the West," 1938, p. 373. Cf: "Experience shows that when trade channels are not unreasonably blocked, the very countries which produce the most manufactured goods for themselves are the best customers for the manufactured goods of other countries." Eugene Staley, op. cit. p. 44.

to be distinctive, in so far as the managing agency system is concerned. In Western countries like Germany, industrial development has been largely made possible through the organisation of industrial banks. The industrial dvelopment of England was largely due to private capital attracted to new ventures and helped by investing houses. In India, banking developed only recently, and has never helped to any considerable extent in the fostering of industrial enterprise. Under the circumstances, it is not difficult to understand why the managing agency system should have played a prominent part in the fostering of Indian industries.

We have traced elsewhere the development of merchant capitalism gradually leading to finance capitalism in India. In the growth of finance capitalism in our country, the managing agency system has played an important part.

The banks are commercial institutions, and not interested in financing industries. There has been a complete absence of industrial banks, and it is only recently that Industrial Finance Corporations have been instituted.

Concentration of Control

It is significant that the tendency towards concentration of control and finance which was characteristic of the managing agency system in the earlier days should have been accentuated in our own times and particularly during the war years. A table that we have already supplied earlier reveals the fact that in 1939 in 64 cotton mills in Bombay, the share of the managing agents was 5 crores and 32 lakhs as loans advanced to the mills, and constituted 21 per cent of the finance of the mills; and an additional 9 per cent of the total finance amounting to Rs. 2½ crores was loaned to these mills on the guarantee of the managing agents.

Before the depression even in the cotton textile industry, the chief field of activity of Indian capital, there was a great concentration in the hands of the British managing agency system. As the Tariff Board Report on the Cotton Textile Industry, 1923, showed, the British managing agents controlled 22 per cent of companies, 33 per cent of mills, 32 per cent of spindles, 30 per cent of looms and 50.3 per cent of capital, in Bombay cotton mills.[1] The depression gave opportunities to managing agents to strengthen their grip on the finances. In times of crises the managing agents in some cases turned their loans to the mills into debentures, with

1 *Labour Research*, June 1928.

the result that the concerns have passed into their hands and shareholders have lost their capital in the undertakings.[1]

Integration in 1939

The concentration of control has been common to all industries. In jute 53 mills with a capital of Rs. 18 crores out of a total of 100 mills with Rs. 23 crores were controlled by 17 managing agents. Four of them controlled 30 mills. Out of 247 coal companies with a capital of Rs. 10 crores, 60 companies with a capital of 6¼ crores were controlled by 18 firms. Four of them controlled 31 companies. In tea, 117 companies were controlled by 17 firms, five of these controlled 74 companies. Similar concentration of control existed in sugar and other industries. In the cement industry, the Associated Cement Company took over the business of 11 different companies.

The British India Corportion formed in 1920 had a capital of Rs. 1¼ crores with a single Board of Directors and controlled two wollen mills, one cotton mill, the North-West Tannery Co., Cooper Allen & Co., one of the biggest boot-manufacturing companies, and G. Mackenzie & Co. dealing in automobiles.

In Western India the Tatas alone controlled 22 concerns with a capital roughly of Rs. 30 crores. These included four cotton mills, four power companies, an oil mill, iron and steel, hotels, airways, chemicals and insurance concerns, etc. with the total assets exceeding Rs. 100 crores. Andrew Yule & Co., controlled 52 concerns with a capital of 7 crores. 34 British trusts controlled about 400 industrial concerns with an approximate capital of Rs. 75½ crores. Half a dozen Indian trusts controlled some 50 concerns with Rs. 37½ crores of capital. There was a tendency to amalgamate existing trusts into bigger trusts. Thus, Martin & Co. took over the control of Burn & Co. which had 4 concerns under its management with a capital of Rs. 10 crores.

The control was exercised not only by a few trusts but in the last resort by a few individuals. In the jute industry 132 men were directors in 271 concerns. It has been said that 500 important industrial companies were managed by 2,000 directors. 1,000 of these directorships were held by 70 men. At the apex of the pyramid stood 10 men holding 300 directorships. This oligarchy in industry has been a closed preserve. The son succeeds the father.

The trusts have maintained close connections with banks and other financial institutions by the simple method of common direc-

1 Banking Enquiry Committee Report, Vol. I, p. 279.

torships. They have their directors in banks, insurance companies and investment trusts. A full idea of the domination of finance capitalists can only be had by calculating the block account; e.g. the Tatas, who controlled iron, coal, mica, silica mines and a number of other concerns, wielded assets over Rs. 100 crores in 1939.[1]

A very important fact in this development of finance capitalism has been the assumption of a swadeshi facade by foreign interests taking in some Indian interests. There has also been a growing interrelationship between the industrial trusts and the Zamindars representing feudal interests. Some trusts control Zamindaries, e.g., industrialists like Birla and Shri Ram are owners of landed estates. Some Zamindars have big holdings in the trusts, e.g., the Maharaja of Durbhanga has substantial holdings in the British India Corporation and Octavius Steel Co. A majority of the foreign concerns took up some Indian directors e.g., the Jatia Brothers in Andrew Yule & Co., Mukerjees in Martin & Co., etc. But the inclusion of some Indians among the shareholders or even as directors did not in the least affect the policy of the foreign managing agents as they retained control over the management in virtue of their managing agencies.

Recent Integration[2]

The tendency towards concentration has been strengthened during and after the war as can be seen from the following table:—[3]

Integration of companies by 6 managing agents in selected industries

		1911	1931	1951
Jute	..	22	31	38
Cotton	..	24	27	36
Sugar	..	6	9	30
Tea	..	58	84	96
Engineering	..	6	15	21

According to Asoka Mehta, in 1949 a group of managing agents controlled about 400 companies with a capital of about Rs. 200 crores covering every field of industry. The concentration of control is common to all industries. In jute only 8 managing agents control 65 per cent of invested capital and 64 per cent of companies. Three of them control 27 companies. The coal industry is virtually controlled by 21 managing agents, 6 of

1 For this section we are indebted to two pamphlets of Asoka Mehta, "India Comes of Age" and "Heights of Simla" 1940, Bombay, which give valuable facts and figures regarding the growth of finance capitalism in India.

2 We are indebted to the valuable brochure of Asoka Mehta, "Who Owns India" 1951, for major portion of this section.

3 Based on Table II of Dr. M. M. Mehta, op. cit. p. 26.

whom control 62 per cent of invested capital and 56 per cent of companies. In the sugar industry 6 managing agents control 40 per cent of invested capital and 40 per cent of companies. In electric concerns 4 managing agents control 77 per cent of invested capital and 48 per cent of companies.[1]

During the decade 1939-49 the process of amalgamation of trusts which was already evident before the war has continued. Smaller trusts have been absorbed into the bigger trusts which have grown more powerful with tremendously strengthened financial capabilities. Thus McLeod and Co., a British trust which controlled 39 companies bought up in 1947 Begg Dunlop which controlled 25 companies. The British India Corporation has taken over Begg Sutherland and Co. which controlled 10 important concerns, 2 in cotton textiles, 6 in sugar and 2 in engineering. At times, when a trust takes over other companies, the latter carry on their work under the old name which conceals the fact of integration.

Almost every major trust has its own insurance companies and banks, or control over them, in order to enable them to collect small savings and get them into their service. The Birlas have their Ruby, New Asiatic and other insurance companies and have their own large bank, the United Commercial with a working capital of over Rs. 50 crores. They have their directors on the Boards of the Reserve Bank, Bank of Baroda and Hind Bank. The Singhanias of J. K. Industries have the Hindustan Commercial Bank and the National Insurance Co., which has a working capital of over Rs. 5 crores. The Tatas have the New India Insurance Co. and their Investment Corporation with a combined working capital of Rs. 15 to 20 crores.[2]

The true extent of concentration of control can be guaged by the number of directorships enjoyed by a single magnate. An analysis of the distribution of directorships reveals that a large number of directorships are held by a minority of influential capitalists. In the coal industry out of 56 companies, 51 companies with 247 directorships are controlled by 28 persons, 7 of whom hold 64 directorships. In jute, 267 directorships are held by 130 persons, 4 of whom have 82 directorships. In the joint-stock companies analysed by Asoka Mehta, there

1 Asoka Mehta, "Who Owns India," Table, p. 30.

2 The growth of finance capital out of the expansion of industrial capital is best illustrated by the exploits of Mr. Ram Ratan Gupta, who purchased the Meyer Mills in Bombay, and with their resources obtained control of the Discount Bank. Through the Bank he managed to get control of the Empire of India Life Assurance Co. with working funds exceeding Rs. 6 crores. (*Ibid.* p. 40).

are 3,728 directorships distributed among 1,013 persons. The following table shows the shape of pyramidal control:—

Persons	Directorship	Average
1,013	3,728	3
932	1,885	2
61	1,038	16
20	805	40

81 magnates have 1843 directorships among themselves, while the top 20 control 22 per cent of the total directorships.[1]

According to the Reserve Bank enquiry, as many as 168 foreign nationals, of whom 139 belonged to U.K., controlled 149 Indian companies—in some cases a company being jointly managed by more than one foreign national as managing director.[2] An ownership of shares valued at Rs. 2.53 crores conferred upon them control over companies with total resources of 55.64 crores. About 34 British trusts control 400 industrial concerns with a capital of Rs. 75 crores. Many of the foreign trusts are only subsidiaries, or even sub-subsidiaries of giant trusts in London. Andrew Yule and Co., which controlled 78 concerns in 1948, is a subsidiary of Morgan Greenfell and Co., the British subsidiary of the House of Morgans.

After the advent of Independence, some British companies have been acquired by Indian trusts at highly inflated prices. British trusts in tune with changing times have allowed a substantial portion of stocks to pass into Indian hands and taken up Indians as directors and partners. Many British concerns are setting up Indian subsidiaries in partnership with Indians. Indian trusts are, thus, not only strengthened but getting enmeshed in international cartels. The following table shows the distribution of directorships in British companies, revealing the extent of the holy alliance between British capitalists and their Indian confreres:[3]

Distribution of Directorships in British Companies

	No of Directorship 1939		No of Directorship 1949	
No. and Class of Companies	**Indian**	**British**	**Indian**	**British**
10 Coal companies	Nil	34	17	28
11 Coal companies	16	26	32	25
13 Jute companies	Nil	49	19	44
21 Jute companies	35	52	63	35
3 Engineering companies	Nil	6	3	11
4 Engineering companies	8	11	15	9
14 Miscellaneous companies	Nil	53	30	37
6 Miscellaneous companies	9	19	18	19

1 *Ibid.*

2 Census of India's Foreign Liabilities and Assets, p. 144.

3 Table V, Dr. M. M. Mehta, op. cit. p. 35.

According to Roy, 44 managing agencies control 640 companies covering a wide field of industries from iron and steel to credit institutions. The Tatas control 32 companies, including the great combine, the Tata Iron and Steel Co., with assets of about Rs. 70 crores, the Tata Locomotive and Engineering Co., whose assets exceed Rs. 5 crores, the Tata group of Hydro-Electric Co. with combined assets of Rs. 21 crores, five of the biggest textile mills with Rs. 11 crores of assets. Only 13 companies out of 32 controlled by Tatas have assets of over 120 crores. They are associated with three of the biggest Indian banks. Next to Tata, among the huge Indian trusts are the House of Birlas controlling 128 companies, including 8 textile mills and one paper mill. They have their own banks and insurance companies. Among other trusts we may mention J. K. Industries group, controlling 50 companies and the Dalmias with 42 companies.[1]

These details bear witness to the rapid development and ramification of finance capitalism in India. At the top of these trusts and corporations is the Federation of Indian Chambers of Commerce and Industry, which resembles the Federation of British Industries in essential features, whose annual session is an occasion for close association of big business with the leaders of Government, for thrashing out major policies.

The industrial expansion in India today continues to lie with a small group of finance capitalists. A new feature of the growth of finance capitalism in recent years is the rise of a new class of Marwari capitalists who dominate our industrial economy and stand next to the British only. In 1931, out of 510 companies analysed by Dr. Mehta, they controlled 6 companies only and held 146 directorships out of a total of 2,213. In 1951, they controlled 96 companies out of 619 analysed, and held 618 directorships out of a total of 2,622.[2] This group whose activities in the past were confined to the fields of traders, bankers and stock-brokers, has entered the industrial field and within two decades acquired a dominating position. This is a danger to our economic development, in as much as the major sector of our economy is fast passing into the hands of a class of people who have been all along speculators and gamblers. The fate of some of the once flourishing concerns which have been incurring heavy losses for

1 "Monopoly Capital," Ajit Roy, 1951, pp. 51-2.
2 Op. cit., Table IV, p. 32.

the first time since they passed into the hands of this group gives cause for alarm about the future.

Another trend which gives cause for anxiety is the venture of finance capitalism into the field of daily newspapers. The control of influential papers like the Times of India by the Dalmias, the Hindustan Times, Searchlight, Leader and Bharat by the Birlas and a chain of papers by the Goenkas, gives to the financiers a grip over public opinion and Government policies, a grip which is further tightened by the subtler methods of hospitality and largesses such as big business knows how to employ.

In addition, there is a growing tendency for foreign capital to strengthen its hold over our economy by spreading its tentacles in partnership with Indian capital and at times the Government with the blessings of the Planning Commission.[1]

Future Policy

Shall we, then, let our industries remain under the unchecked control of these oligarchs?

If industrialisation is necessary, and if we are interested in fostering the further growth of industries in the larger interest of India as a whole, finance capitalism and the concentrated control of our times has to be replaced by the nationalisation of our key industries which would include mining, banking, insurance, communications, the heavy chemicals and the iron and steel industries, and by socialised control of all other industries, by legislation limiting the rates of profits to the shareholders and absorbing the residue through taxation.

The industrialisation of India, thus, need not be a blind imitation of Western industrialism. The foundations of modern industries are both material and psychological. The development of industries is determined partly by command over natural resources, partly by scientific knowledge, partly also by the habits and institutions which would enable the knowledge to be applied and the resources to be utilised. So far as scientific knowledge and technological methods are concerned, they are an international asset available to all. But industrialisation is not an ingenious contrivance, a hot-house exotic, which a country can import, irrespective of the environment in which the new technique is to function. What makes modern industry is not the machine but the intellectual potentialities

1 For fuller details of recent integration, see valuable brochures of Asoka Mehta, "Who Owns India" and Ajit Roy, 'Indian Monopoly Capital' op. cit.

and the institutional structure which make the utilisation of the machine possible. Do we desire industrialism on the Western model? That there are large sections of the leaders of economic thought and of public life, who desire without qualification an imitation of Western capitalism on an individualistic basis, we readily admit. It is the attitude of this section that was reflected in parts of the Fiscal Commission Report of 1923. On many occasions, Indian publicists have grown eloquent over the magic wand of modern industry turning this land into a land of milk and honey.

Shall we endorse this attitude of blind faith in the virtues of capitalist industrialisation? We have an indigenous culture which we would not readily throw over; we have a conception of life proper to civilised man. If we desire industrialism, we shall take it on our own terms. We need not imitate. It is a question of adaptation and adjustment. We possess a laborious and intelligent population, with unusual gifts for creative production. Owing to the abundance of human labour this labour is cheap. It is the very cheapness of labour that has partly retarded the introduction of machinery. What is more to the point is our deficiency in technical education. In fields like agriculture and engineering, one thinly populated State like Iowa, with one per cent of the population of India, has a large number of students. We have also a variety of valuable raw materials. Already we have manufactures by modern methods of commodities which a generation ago were produced by hand. If we have been industrially backward that backwardness has been "in no way due to any inherent defects amongst the people of India but artificially created by a continuous process of stifling, by means of a forced tariff policy, the inborn industrial genius of the people."[1]

Owing to the poverty of the millions of our agricultural population and the absence of communications, our internal market has been limited but capable of vast expansion with the improvement of transport and a rise in the standard of living. It is difficult to believe for example, that we cannot work up our raw cotton and silk, grow our own fruit and can it, multiply oil mills, supply our own railway materials and revive our own shipping industry. What we need for such a rapid industrial development is, in the first place, an immediate and intensified programme of roads and other means of com-

1 Minute of Dissent, Fiscal Commission Report, 1923, p. 180.

munication. There can be no rapid industrial development in the absence of an adequate system of transport. The farmer will find new and more profitable markets within his reach. The growth of our industries will create a greater demand for agricultural products and the increased prosperity of our agriculture will in turn give rise to an increased demand for the products of our industries.

Better means of communication will have to be accompanied by a fiscal policy which will secure our struggling manufacturing industries against competition from abroad.[1] Nobody doubts today that a tariff on manufactured imports is a reasonable method of fostering our own industries. What is equally important is the adoption of some settled policy of industrial development which would aim at definite objectives to be carried out over a period of years. That objective should be primarily the achievemnt of a balanced economic existence by making our country self-sufficient to the extent to which our economic resources make it possible.

Such a policy does not involve a mere imitation of the industrialism of the West. We must shake ourselves off from the assumption that mass production is the only method of promoting economic progress. We are a nation of farmers and artisans. 80 per cent of our population live in village surroundings. If we can assist these craftsmen by the improvement of their technique, by education, by more effective marketing of the commodities that they produce, at the same time that we foster large-scale production, we may avoid by these measures the mass unemployment and the compulsory idleness of millions maintained on doles, which Western industrialism has brought with it.

We must not only think of developing our cottage industries but also consider how far we can avoid by legislation and executive control, the overcrowding under slum conditions, the prevalence of industrial diseases, and the exploitation of our factory population under unregulated private enterprise aiming only at profit. Today, so far as large-scale industry is concerned, the easy-going employer of old, who was associated in work with his men like a father with his family, has been replaced by a tyrannical and greedy foreman who exacts as much in the shape of work as he can get from his employees. The

1 The increasing infiltration of foreign capital through partnership in ostensibly Indian concerns, under guarantees of compensation, has created a new problem and a new challenge to financial statesmanship, not easy of solution.

casual domestic atmosphere of the old fashioned workshop with its gossip, smoking, chats with passers-by and meals shared by workers and master, has given place to factory routine and discipline without any of the compensating amenities in the shape of leisure, safety, sanitary surroundings and educational opportunities. Industrial legislation for shorter hours of work, for the provision of proper sanitation, of better housing, and of wage standards which will secure physical efficiency is needed; but will such legislation bring to human labour the opportunities for a fuller life?

It is possible to plan our future industrial development on the basis of the service motive and not on the profit motive. We must not be hypnotised into the belief that our finance capitalists further the general welfare of our people, whilst they add to their profits by large-scale productive enterprise. This has been made crystal clear by blackmarketing and hoarding during and after the war. We have passed the stage when we naively believed that the pursuit of profit contributed to the general interests of the consumer. Public welfare must not be a by-product of the profit-making activities of the few. Protection in India of industries like sugar, iron and steel and textiles has involved substantial sacrifices on the part of consumers. If protection is to be continued and its scope is to expand, it must be devised in the public interest. Recent experience has shown that the indigenous capitalist is in no way different from his counterpart in the West. If anything, he is often worse. As Asoka Mehta points out, "From the workers' point of view, an Indian trust is often a worse master than a British trust. The condition of the workers of the Dalmia Sugar Mills, for instance, is inferior to that existing in the Belapur Mill of Brady and Co."[1] In the mad pursuit of profit, the Indian capitalist has refused to take any lessons from the tragic experiences of industrial development in the West, and this, coupled with a *laissez faire* policy and consequent apathy and indifference of an alien Government in the past, has been responsible for the existence of some of the worst features of Western industrialism, which could have been easily avoided in our country, while its good features are mostly conspicuous by their absence.

The intense exploitation during the war and post-war period, in the name of emergency, in the form of high prices and consequ-

1 Op. cit. p. 6.

ent huge profits is a clear indication of the "shape of things to come," if the process of expansion of our finance capitalism is to continue uncontrolled. Soaring prices always mean huge profits; and so far there has been no effective attempt on the part of Government to control profit. The inexorable logic of capitalism is already at work in our country.

We need a balanced economy by a properly devised industrial policy in which large-scale, small-scale and cottage industries can be developed by means of a reoriented policy in close association with agriculture, so that the minimum of decent living may be brought within the reach of all. The policy underlying the Five Year Plan and its actual implementation by Government, however, do not offer much hope for the removal of the poverty of the masses or the glaring inequalities in wealth. The promise for the future lies in the substitution of private enterprise by State control in a society democratically organised. Many of the world's troubles in the past have been due to the fact that the State has always been an instrument in the hands of a particular class—the owners of the means of production,—with the result that those who have been excluded from power find themselves excluded from its benefits.

Finally, industrialisation of the type we envisage, like agriculture, presents us with a dilemma. If it is brought about by State control and State regimentation, it destroys the hope of securing the willing co-operation of the people as a whole, and the very foundations of social democracy; if its success depends on the classes in positions of power and privilege voluntarily subordinating their interests to those of the larger body politic to which they belong—if property is to be regarded as a trust for the benefit of society,—it will take a long time before such an objective can be achieved, and our goal reached.

CHAPTER XXX

THE NATIONAL DIVIDEND

The Concept of National Dividend or Income

The *raison d'etre* of all economic activities is the satisfaction of human wants and needs. Hence the economic welfare of an individual or a nation depends upon the availability of goods and services for consumption. The actual production of goods and services during a particular period of time is determined in turn by the national or social wealth. The term national or social wealth

taken in a wider sense includes not only the national resources of a country but also the multitude of advantages which a country may possess in the shape of salubrious and bracing climate, in the grandeur and beauty of natural scenery, in the possession of navigation facilities like rivers and harbours, geographical location and the attraction of historical relics and monuments. But for practical purposes, it is usually defined as the sum total of the possessions held by the people of a country which are appropriable.

The social or national wealth is the fund or capital which is in parts measurable and in parts not measurable. On the other hand, the national dividend or income is the current of utilities that flows out of this fund or capital of wealth. All the elements of social wealth add to the annual flow of utilities; but so long as there is no corresponding flow in terms of money, they are not taken into account in calculating the national income. All those elements of the fund are reflected in the national income which directly or indirectly increase the efficiency of production and result in a greater amount of goods and services, or in so far as they attract foreign tourists. This is due to the fact that the concept of national income is limited to those utilities in the form of goods and services which possess exchange value. Many utilities though they increase economic welfare have to be left out for the simple reason that they do not enter the orbit of exchange economy. Thus for example, as Pigou points out, houses and furniture enter into the national income if we hire them out, but not if they are given to us as a gift, though the utilities derived from them in either case remain the same. As a rule, all goods and services without a corresponding flow of money payments are excluded; and all those which are "customarily exchanged for money" are included in the computation of the national income. There is an element of arbitrariness in all such computations. Thus the utility derived from a house, whether rented or used by the owner, is included in the national income, whilst the utilities derived from other durable consumption goods, like cars and books, clothes and crockery are excluded. It is argued that the occupation of a house is a service customarily exchanged for money, whereas this is rarely the case with the use of furniture, motor cars, etc. It may be noticed, however, that more recently Swedish economists, like Lindahl, and American economists like Dr. King, have calculated the "imputed" income from the stock of durable goods of this kind in their estimates

of national income. In the case of a country like India it is obvious that we cannot restrict ourselves to customarily exchangeable goods and services only for calculating the national income. Most of our agricultural produce is consumed by the producers themselves and a considerable amount of farm labour is rendered by the farmer's family.

The property principle cuts across the territorial principle. Thus the income from property held abroad, capital movements, income from services rendered outside one's own country, are all included in the national income. The question of what should be included and what should be excluded from an estimate of the national income has given rise to a number of theoretical problems on which considerable differences of opinion exist among economists.

The problem of inclusion of services is a controversial problem. Hungarian economists like Felner and Varga, and some Indian economists exclude services from national income, on the ground that there is no logical consistency in including some services and excluding others. Services rendered by domestic servants are included and raise the national income. On the other hand, services rendered by family members are excluded, for the latter are not paid for. The services rendered by mothers and housewives, are valuable and yield "a fund of annual satisfaction, which might be, but is not in fact, regularly measurable in money." These services are not included, but the same services when rendered by employees like governesses or ayahs and maids are included. A curious paradox consequently occurs like that mentioned by Pigou, namely, when a man marries his own housekeeper the national income diminishes. On the contrary, during war times, the national income increases because of the diversion of women to war work, their household work being done by domestic servants. It may also be noted that "in highly developed countries characterised by shortage of paid domestic help the unpaid services of housewives may be very substantial."[1] Services like driving one's own car or repairing one's own house are excluded in the conventional computation of national income.

Another controversial point arises with regard to the inclusion of the services of public servants. Some economists exclude them from the national income. As Professor Matolscy and Varga point out, 'If the amount of the public administration increases,

1 "National Income Statistics, 1938-48," United Nations, 1950, p. 16.

the national income does not therefore become greater, just as it would not become smaller, if the amount of administration could be reduced, provided the prices of consumers' goods remain unchanged. This would only affect the distribution of incomes...We do not dispute the usefulness of the public services; but it seems to us that the results of their usefulness appear in the value of goods and services produced, and an inclusion of the cost of public services as such would mean double counting."[1] More recently, however, this view is not rigidly held; and in most of the countries including Hungary certain services are included. As a matter of fact, in all countries State services and public authority employees are counted in the national income. It may be observed, however, that in a country like India with a top heavy administrative expenditure, the inclusion of the public services gives us a higher figure for the national income. In Soviet Russia, all-non-material services are excluded from the computation of the national income.

So also the income received by individuals without rendering any actual services, namely, old age pensions, widows' pensions, money transfers like gifts, charities, war pensions, interest on war loans, is excluded. But the interest on national debt for productive purposes or on municipal bonds and loans is regarded as a part of the national income, as it contributes to the value of the flow of services rendered by the State and local bodies. According to Mr. Colin Clark, pensions to civil servants should be included as they are a sort of postponed payment for services rendered.

Definitions

What then, is the "national income," and how can we define it? Several ways have been adopted for the purposes of definition, and the rightness or wrongness of the definition is determined by the suitability of the definition for the particular purpose in view. The United Nations publication on National Income Statistics gives us three different versions of the concept:[2]

(1) **Net national product,** i.e., the aggregate of the net values added in all branches of economic activity during a specified period, together with the net income from abroad.

(2) **The sum total of distributive shares,** i.e., the aggregate of income payments accruing to the factors of production in

1 "National Income of Hungary," 1938, p. 6.

2 "National Income Statistics of Various Countries, 1938-47," United Nations, 1948, p. 5.

a specified period. These payments take the form of wages and salaries, profits, interest, rent, etc.

(3) **Net national expenditure,** i.e., the sum of expenditures on final consumption goods and services, plus domestic and foreign net investment in a specified period.[1]

The income concepts used by different countries include "national income at factor cost," the total of all income payments accruing to factors of production. It equals the aggregate net output of all goods and services, valued net of indirect taxes, but after the inclusion of subsidies. If the value of the output of goods and services is based on market prices, the national income is referred to as "national income at market prices." Thus, national income at market prices, or net national product (or expenditure) at market prices, equals national income at factor cost plus indirect taxes or similar levies, minus subsidies.

Gross national product (or expenditure) at market prices designates the value of current output at market prices before deduction of depreciation charges and other allowances for capital consumption. National income, or net national product (or expenditure), on the other hand, denotes the value of that part of current output that can be used up without impairing the stock of capital.[2]

The following extract which we reproduce from a table furnished by Messrs. Meade and Richard Stone, in a brochure on "National Income and Expenditure,"[3] illustrates the various definitions of National Income which have been adopted for different purposes. (The figures given are for the year 1950 in millions of £ sterling for the United Kingdom).

1 The period covered by the definitions is nearly always taken as a year. All these definitions lead to the same national income figure, provided that all constituent items are treated consistently in the three approaches. A check on the reliability of the national income total is therefore possible when estimates are made independently according to these definitions.

2 "National Income Statistics of Various Countries, 1938-48," United Nations, 1950, p. 8.

Cf. "In the circuit flow of economic activity the same total income can be measured at the point of production, as a sum of net outputs arising in the several industrial sectors of the nation's productive system; at the point of flow of incomes as the sum of all incomes in cash, in kind and retained by enterprises as net profit; at the point of final utilisation, as the sum of consumer expeditures, government purchase of goods and services, and net outlay on capital goods. The total of net outputs, income flows, and final expenditures, with allowance in each for flows across boundaries, will, of course, be identical." (First Report of the National Income Committee, April 1951, issued by the Department of Economic Affairs, Ministry of Finance, Government of India, p. 7).

3 Third Revised Edition, 1952, Table I, p. 15. This small brochure is an excellent introduction to the subject of national income.

	Various definitions of National Income	£
1	Personal income before tax	10,962
	plus Undistributed profits before tax	1,141
2	Private income before tax	12,103
	less Transfer payments[1]	— 1,374
	plus Government income from property	117
3	Net national income at factor cost	10,846
	plus Depreciation, etc.	1,124
4	Gross national product	11,970
	plus Indirect taxes net of subsidies	1,602
5	Gross national expenditure at market prices	13,572

Thus for consideration of taxation and of personal habits of saving and spending we are concerned with personal income before tax. But if we are interested in the study of standards of living, these can be maintained only from the community's output of goods and services. We shall, then, have to exclude from income all receipts that do not arise from the production of goods and services. On the other hand, we have to include income from property owned by the State and other public bodies, as it is received from the production of goods and services. Such estimate of income is described as the "net national income at factor cost." If, on the other hand, our object is to estimate the total market value of the goods and services produced, we have to add the total of indirect taxes to the net national income at factor cost. On the other hand, we have to deduct the amount of subsidies paid. The result thus arrived at is described as the gross national income or expenditure at market prices.[2]

Methods of Calculating National Income

Three methods of calculating the national income have been suggested: (1) the subjective method, (2) the objective method, and (3) the mixed method. Sir Josiah Stamp has termed the first and the second methods as the income and the inventory method respectively. The subjective or income method is based on income-tax statistics. This has to be supplemented by the calculation of those incomes which are below the income-tax limit. Otherwise quite a good amount of income would remain uncalculated. Such a method is useful in countries where the

1 Transfer payments represent not payments for the production of goods and services, but transfers of income through the medium of the state, or a similar public body from one set of individuals to another. Such transfer payments include interest paid on the national debt and payments like unemployment benefit and old age pensions, financed by taxes from those in work or below a certain age to pay those out of work or above a certain age (*Ibid.*, pp. 9-10).

2 *Ibid.*, pp. 9-12.

proportion of income-tax payers is relatively large and where there is an adequate and accurate wage census. The objective of inventory method, which is sometimes also called the "census" method, consists in the evaluation of the total aggregate of goods and services available for consumption at market prices. Such a method presupposes an accurate and detailed census of production. The danger of duplication is especially great in the use of this method. The combination of both these methods is called the mixed method.

The method adopted for estimating the national income of a country depends upon the kind of data available. At times one or the other method may be used. At other times both may be employed simultaneously to check results. Sometimes each of the methods may be used for part of the calculation and their summation gives the total income. But, as Bowley and Robertson point out, "The two methods do not furnish a check over one another over the whole field; thus the services of cabinet ministers must be held to be worth the amount of their salaries since there is no other way of evaluating them."[1]

In our country the great majority of the population are agriculturists whose income does not fall within the purview of the income-tax. The income-tax moreover touches a very small section of the population. There is no all-India wage census. There is likewise no proper census of production and "it seems unlikely that the census of production method will ever be applicable over the whole even of the industrial field."[2] There are no figures available of the number employed and salaries paid to employees of Government or local bodies. No statistics are to be found regarding domestic services. In the absence of all such data the calculation of the national income of India seems to be an hazardous adventure.

Social Accounting

Ever since the outbreak of the War in 1939, the study of national income has acquired tremendous importance as the necessary basis of economic policy. During the war period, the necessity of a complete picture of the entire economy of a country was keenly felt, and this led to the refinement of the concept of national income and the technique of calculating it. Thus the first national accounts of the United Kingdom were presented to Parliament in 1941. In these sets of accounts the principle

1 "A Scheme for the Census of Production," p. 9.
2 *Ibid.*

of double entry was used, and they were designed to help the Government in formulating its war time financial policy. It was Lord Keynes who inspired the calculations and urged their publication.

"A system of social accounting is a practical means of describing what is taking place in an economic system, in so far as this can be expressed in terms of transactions between a set of accounts drawn up on the double entry principle."[1] For each transaction there is an entry on the payments side in one account and on the receipts side in another account. The number of accounts is a matter of convenience. Separate accounts may be given to different sectors of the economy—e.g., businesses, persons and the Government—and to different activities of these sectors. For each transacting activity there will be a system of three accounts. The first account (operative account) brings together all transactions connected with productive activity. The second (appropriation account) recognises the fact that the transactor receives spendable income from sources other than its own productive activity, like gifts, and shows how the total income is distributed between consumption, expenditure, transfers including direct taxation, and the net saving of the transactor concerned. The last account, adding to wealth (resting account) brings together all capital transactions looking at the matter from the standpoint of business accounting, as an account in which costs rest until they are finally written off out of revenue. On the incoming side savings, bad debts, provision for depreciation are brought down from the operating account. On the outgoing side appear total fixed asset formation, with changes in inventories, and capital transfers such as post-war tax refunds are brought down from the operating account. The items in this type of account are those which normally appear on a balance sheet.[2]

A social accounting system offers a framework for a systematic collection of information on transactions, provides a means of working out the practical implications of any theoretical plan, of describing the structure of an economy and the way in which its parts are related.[3] The Report of the National Income Committee recognises the utility of national income estimates and accounts, but points out that these statistical mea-

1 R. Stone, "Functions and Criteria of a System of Social Accounting" in "Income and Wealth" Series I, edited by Eric Lundberg, 1951, p. 1.

2 *Ibid.*, pp. 28-29.

3 "National Income Statistics, 1938-48," op. cit. p. 5.

sures do not in themselves yield determinate answers to questions of economic policy. They still leave room for value judgments. They, however, "form a useful base for intelligent decisions, and can minimise, if not altogether eliminate, the guesses and prejudices that so much underlie current policy judgments on economic issues."[1]

Utility of National Income Statistics

An important problem in economics is that of distribution, the problem of dividing the goods and services produced among the people for consumption. Economic welfare may be said to be measured by the amount of the national income. But economic welfare is a wide term, and it would be more accurate to speak of national income as affecting economic welfare. Thus as Haberler suggests, "Other things being equal, economic welfare is greater, if national income is greater; such other things that also affect economic welfare but are usually not considered as part of national income, e.g., the presence or absence of certain wants."[2] Thus, we find that in a community with poor health more money has to be spent on doctors and though this may not impair the productive power of the community, economic welfare is definitely less than it would otherwise be. We may not speak of real income being less, but we may say that a larger part of national income consists of the services of doctors. Of course, if the productive efficiency is impaired by poor health, national income will be affected to some extent, but because of the inclusion of the services of doctors it would be less affected than economic welfare. In the same way, to facilitate the smooth running of the economic system, money might be spent on "policing" the system to a greater or small extent. This involves the diversion of effort from the production of goods and services for consumption. "Thus there are a variety of factors which affect economic welfare, that is to say, make the situation more or less desirable than it would be in their absence, but do not or need not in general affect real income."

When we take the national income figure as an approximate index of economic welfare, we should take into account all the relevant factors involved, e.g., the extent to which the economy of the country is non-monetary, the distribution of income (for inequality of incomes distorts value), age composition of the population, etc. National income figures are an index to

1 First Report, op. cit. p. 11.

2 "National Income, Saving and Investment," in "Studies in Income and Wealth," Vol. II, 1938, pp. 140-141.

the standard of living possible for a people and may become useful in estimating the taxable capacity.[1] They are useful also for finding the trend of economic development or progress over a period of time. When we do so we have to take into account the changes that might have occurred in prices, in the habits of the people regarding food, drink, clothing and other things. Even then, we must not forget that "a community making a great economic progress may lack, and an economically unprogressive community may possess, in full measure the other values of life, such as sense of contentment and of hope for the future."[2]

As we have already mentioned, the definition of national income varies from author to author. The nature of the data on the basis of which national income calculations are made also varies. All these facts limit the value of national income statistics, in their use not only between country and country but also in the same country. When we use these figures to make comparisons between different years, we must not forget that they are average figures and do not throw any light on the distribution of the income. While making comparisons between country and country, we have to be careful not only regarding the extent to which the respective economies are monetary or non-monetary but also regarding the differences in prices, standards of living, habits, etc.[3] Thus, it would be misleading to compare national incomes of countries with different standards of living and methods of production. In brief, we may say that statistics of national income are not of great value in international comparisons, though under certain limitations they may be useful in making comparisons between different periods of time within the same country.[4]

1 Cf. "If one has at hand a customary component in national product estimates, measures of consumer expenditures by various categories (food, clothing, etc), it should presumably be possible to approximate what different rates of taxes with different coverage would yield, since even a single year's figure gives an order of magnitude of the level of retail sales in a country." National Income Committee, First Report, op. cit. p. 9.

2 Colin Clark, "Conditions of Economic Progress," 1940, p. 1.

3 It has been pointed out that in underdeveloped countries "the existence of a native subsistence economy side by side with a modern western enterprise sector and price levels may make it difficult to attach meaning to a total obtained by summing up figures for the two sectors separately." (Economic Survey of Asia and the Far East for 1950, U. N. 1951, pp. 106-107).

4 As Dr. Bowley points out, "It is very doubtful whether numerical comparison can safely be made between two countries; neither housing, clothing nor food are comparable; the importance of that part of income which is not wages varies greatly, and many things must be bought in one country which are unnecessary or are home-made, home-grown, or obtained freely in another. Nor should we compare industrial classes, such as workmen engaged in building or engineering or printing, in different countries, since methods and conditions of work vary enormously, unless we make very broad allowances for the possible

National Income of India

Various estimates have been made of the national income of India, the earliest being that of Dr. Dadabhoy Naoroji for the year 1868 and the latest that of the National Income Committee for 1948-49. The following table gives us some selected estimates of *per capita* income of India:—

Name of Author	Year for which estimate is made	Income in Rupees
Dadabhoy Naoroji	1868	20
William Digby	1899	18
Findlay Shirras	1911	49
Findlay Shirras	1922	116
Shah and Khambatta[1] ..	1921	74
Wadia and Joshi	1913-14	44.3
Findlay Shirras	1931	63
V. K. R. V. Rao	1925-29	76[2]
V. K. R. V. Rao	1931-32	65
R. C. Desai	1931-40	85
Government of India ..	1945-6	204 (Union Provinces)
Government of India ..	1946-7	228 („ „)[3]
National Income Committee	1948-9	255 (Indian Union)

Limitations of Estimates of National Income of India

The period covered by the different estimates ranges from 1868 to 1948-9. During this period far reaching variations have occurred in the price level. The Indian price index numbers based on 1873 (including 39 unweighted articles but not including foodgrains upto 1879) showed the following variations:

Year	Price index number	Year	Price index number
1873	100	1921	281
1900	116	1925	236
1913	143	1930	171
1920	281	1936	125

effects of such variations." (The Nature and Purpose of the Measurement of Social Phenomena, p. 186).

Writing in the preface to the second edition of his work on "Conditions of Economic Progress," 1951, Colin Clark observes: "The whole aspect of economic teaching and research in England has now been transformed. The study of real and money national income, and the causes determining their movements, not as theoretical concepts but as observed facts, is now fully recognised as the essential subject matter of economics.........The war period evoked great extensions and improvements of national income statistics."

1 For the whole of undivided India. The remaining estimates are for undivided British India.

2 Raised to Rs. 84 allowing for previous understimation of non-agricultural income (vide "National Income of British India," V.K.R.V. Rao, 1939, Preface p. VIII).

3 The national income *per capita* figure for 1946-7 of Rs. 228 "does not imply a real increase in our national income when compared with the figure of Rs. 204 per head for 1945-6, particularly because allowance has to be made for the rise in the general price level of the order of 12.5%" (National Income of the Indian Union Provinces, 1946-7, Government of India, p. 1.)

Taking 1939 again as base we have the following variations between the two years:—

Year	Price index number
1939	100
1948	383

Indian statistics are largely a by-product of administrative exigencies and are far from reliable. "They are unco-ordinated," as Bowley and Robertson point out, "though in some branches careful work is being done, and determined efforts made to improve the accuracy and scope of information, in others they are unnecessarily diffused, gravely inexact, incomplete or misleading; while in many important fields general information is almost completely absent........ The situation cries out for overhaul under the control of a well-qualified statistician."[1] They point out for example that "the rural price statistics are diffused. Bengal rice figures are held to be gravely inexact, birth and death returns are incomplete, and so published as to be misleading; and there is no general information about wages."

In a country like India where 80 per cent of the people are dependent on agriculture, agricultural statistics play an important part in the calculation of the national income of India. But "the statistics even of cropped products leave much to be desired, while statistical information about other important parts of agricultural income such as the output of animal husbandry are almost completely lacking, and statistics of industrial production are patchy in the extreme."[2] This criticism of Indian statistical information is valid today, two decades later.

The National Income Committee state that a considerable amount of output is consumed by the producers themselves or bartered for other commodities or service. To avoid this difficulty they suggest a twofold estimate of India's income, to include a classification of monetary and non-monetary sectors, a thing unknown in the national income estimates of advanced countries. There is a further element of guesswork in the assessment of output, due to the general absence of the practice of keeping accounts either among producers or among consumers. The Committee also stress the general non-availability of statistical data for the estimation of income and related accounts in India. The prices and expenses data for agricultural activities are incomplete. Data on factory establishments are limited to only a part of the industries.

1 Op. cit. p. 1.
2 *Ibid.*, footnote.

Data both on total and working population are obsolete. There is no information on the structure of costs, on consumer expenditures of the population attached to land or on their savings. There are no useful data on the distribution of income by size, and no data for an estimate of capital formation.[1]

It is also be noticed that the basis of calculation of the various estimates differs from author to author. Dadabhoy Naoroji, Digby, Shah and Kambhatta excluded services from their computation. The earlier official estimates added 50 per cent for non-agricultural income—definitely an over-estimate—to the total value of agricultural income. Mr. Findlay Shirras took non-agricultural income at about 40 per cent of the agricultural income, while Shah and Khambatta took it at 10 per cent and Wadia and Joshi at 30 per cent. Mr. Findlay Shirras made an allowance for seeds in calculating agricultural income. The later estimates show a great variation mostly due to fluctuations in the price level, which increased by more than 100 per cent during 1913 and 1920, fell below the 1914 level after 1930, and rose by more than three times since 1939. When we take into account these limitations and differences, it may not unreasonably be maintained that these estimates are not comparable. Dr. Rao made use of all the available data, including village surveys, and supplemented them, by his own personal *ad hoc* enquiries into the output of meat and milk, and incomes of industrial wage earners, domestic servants and others. Allowing for a margin of error of $\pm 6\%$, he estimated the national income of British India for 1931-32 at Rs. 65 *per capita*. His previous estimate for the quinquennium 1925-29 was Rs. 76. Counting it in terms of the price level of 1931-32, it was Rs. 55 per head.

Dr. Desai has approached the problem at the consumption end and calculated consumers' expenditure for 1931-32 to 1940-41. His estimate of the national income for British India works out at Rs. 82.5 *per capita* in 1931-32. He considers Dr. Rao's figure of Rs. 65 a "considerable under-estimate."[2]

National Income Committee Estimate

The latest and more reliable estimate of the national income of the Indian Union is for 1948-49. It has been prepared by a committee consisting of Professors Mahalanobis, D. R. Gadgil and V. K. R. V. Rao, advised by three foreign experts, Prof. Kuznets, University of Pennsylvania, Mr. J.R.N. Stone of Cambridge

1 First Report, op. cit. pp. 12-15.
2 "Standard of Living in India and Pakistan, 1931-32 to 1940-41," 1953, pp. 279-280.

University, and Dr. Derksen of the United Nations Statistical Office. The First Report of the Committee published in 1951 discusses the importance of national income in relation to economic policy, the problems attending its estimation in India, available data with their limitations and gives us the estimate for 1948-49. The report is significant in as much as it is the first official attempt towards the determination of the national income, its breakdown by industrial origins, and by character of enterprise, per engaged person. It calculates the share of Government in domestic product and expenditure, and analyses the national income totals in relation to flow of goods and services across the boundaries of the country. It finally gives a framework for social accounts for 1948-49. The final report of the Committee is expected to lay down a sound foundation for the development of national income estimates in India.[1]

The following tables give the National Income of the Indian Union and its detailed analysis for 1948-49. (Population estimate at 341 million for 1948):—

National Income of Indian Union[2]

	Crores of Rs.
Domestic Production at factor cost	8,730
Less net earned income from abroad	20
National income (net national output) at factor cost .	8,710
Add indirect taxes minus subsidies	460
National income at market prices	9,170
Per capita National income	255

National Income by Industrial Origin[3]

Items	Net output (Income) (Crores of Rupees)	%	No. of persons engaged in lakhs	Net output (income) per engaged person Rs.
Agriculture .. .	4,150	47.6	905	500
Mining and large-scale industry .. .	640	7.3	38	1,700
Small-scale industry .	860	9.9	149	600
Communications and Railways .. .	230	2.6	12	1,900
Banking and Insurance .	50	0.6		
Commerce and Transport (including services of indigenous moneylenders)	1,420	16.3	95	1,500
Professions and Liberal Arts	320	3.7	50	600

1 The Government of India has formed a National Income Unit of the Ministry of Finance as an office attached to the Minstry of Finance since July 1949. This will ensure a continuity of national income calculations as is done in other countries, and will help in the formulation of a sound economic policy.

2 Based on Table 8 of the First Report, op. cit. p. 43.

3 Based on Tables 2 & 4 pp. 29 and 31. *Ibid.*

Government Services ..	460	5.3	36	1,300
Other Services	600	6.9	42	400
Total net domestic income	8,730	100 2	1,327	—
Less net earned income from abroad	20	0.2		
Net National Income at Factor Cost	**8,710**	**100.0**		**600**

Shares of Public and Private Sectors in Domestic Product (National Income) and Expenditure.[1]

1948-49

	National Income (Crores of Rupees)	%	National Expenditure (Crores of Rupees)	%
Net output of Government administration and enterprises	760	8.7	830	9.1
Net output of private sector	7,970	91.3	8,340	90.9
National Income or Expenditure	**8,730**	**100.0**	**9,170**	**100.0**

Government draft on Private Income[2]

	(Crores of Rupees)	%
Direct Taxes	200	2.3
Indirect Taxes	420	4.8
Miscellaneous fees, etc. ..	70	0.8
Total Draft ..	**690**	**7.9**
Net Domestic income ..	8,730	100.0

The National Income Committee Report, however, reveals some very significant facts in Indian economy: (a) Agriculture, animal husbandry and ancillary activities contribute 48 per cent or nearly half the national income, while commerce, transport and communications contribute 19.5 per cent or nearly a fifth of the total national income. Commodity production by agriculture, mining, manufacturing and hand-trades amounts to nearly two-thirds of the total national income. (b) The contribution of small enterprises including unclassified items accounts for more than 61 per cent of the net domestic product, whereas the contribution of larger enterprises is 12 per cent. This is a sufficient indication of the relative importance of small enterprises in the structure of our economy. (c) The number of persons engaged is estimated at 13 crores for 1948-49, that is, 38.9 per cent of the total population. In other words, every thirty-nine persons out of 100 have to support by their work not

1 Based on table 5, *Ibid.*, p. 34.

2 First Report, op. cit. p. 33.

only themselves but the remaining 61 persons. The net annual output per engaged person is Rs. 500 in agriculture, Rs. 800 in industry, Rs. 1100 in the services, while the numbers engaged in these occupations are 68%, 14% and 10% of the total working population respectively. (d) Small enterprises engage 80% of the total number employed in industries; but their net output is about 10% of the total net domestic product at factor cost This is sufficiently illustrative of the dominant place of small enterprise in our economy. (e) "It is interesting to note that the cost of government administration in this sense (that is, the net output per engaged person in this sector) is practically double the average output in the country."[1] (f) Expenditure on food amounted to nearly 58% of the national income. The high proportion of expenditure on food is an indication of the poverty of the people and the backwardness of our economic development.[2]

Distribution of National Income

An unofficial estimate of the distribution of income in India for British business gave a revealing picture of the plight of the masses in India:—[3]

Range of Incomes of Indian Households

Number of Households	Income in Rupees		Equivalent in £
6,000	Over	100,000	7,500
270,000	Average	5,000	375
250.000	,,	1.000	75
35,000,000	,,	200	15
Remaining	,,	50	$3\frac{3}{4}$

These figures, evidently calculated to explore the possibilities of British business in the Indian market were not likely to be unduly optimistic.

According to Dr. Rao, the urban income per head was more than thrice as high as rural income in 1931-32, the rural income being 51 Rupees, whereas urban income was Rupees 166. There is a real difference in the economic condition of people living in towns and in the villages. And 80 per cent of our people still live in villages. Among the urban classes themselves there are vast inequalities. Nearly one-half of the urban income belonged to less than one-tenth of their total number. Even among the com-

1 First Report, op. cit. p. 33.

2 In this connection the comparative data given by Dr. Desai are interesting. They show that in India 60.5% of the total consumption expenditure was spent on food in 1938-39, as compared to 29.1% in U. K. and 22.3% in U.S.A. in 1938. Op. cit. p. 281.

3 "The Indian Market" in the "Times Trade and Engineering," Indian Supplement, April. 1939.

paratively well-to-do with an income of over Rs. 2,000 per year, 38 per cent possessed only 17 per cent of the total income and a little more than one per cent claimed as much as 10 per cent of the total income.[1] Similar inequalities are characteristic of agricultural classes due to concentration of land and the very low earnings of the rural workers.

Dr. Desai's analysis of consumption expenditure in the decade 1931-32 to 1940-41 reveals increasing pressure of population and the intensification of unequal distribution of national income.

As regards the distribution of national income between urban and rural sectors, the National Income Committee find it difficult from available data to arrive at any accurate measurement of income between the two sectors, though they consider such measurement important for the formulation of a sound policy of national development.

The inequalities in the distribution of income in India have been brought out in a table supplied by a Socialist Party brochure relating to the year 1948-49. This table indicates the number of taxable incomes in relation to the number of earners and the total taxable income in relation to the national income:[2]

(a)	Number of taxable incomes	4,61,079
(b)	Total taxable income in lakhs of rupees	4,15,87
(c)	Number of earners	13,27,00,000
(d)	National income in lakhs of rupees	8,73,000
(e)	Percentage of (a) to (a)	0.35
(f)	Percentage of (b) to (d)	4.7

That inequalities in the distribution of income are greater in India than in the U.K. and that the trend in India during the decade 1938-1948 has been towards increase in disparities is evidenced by the following tables.—[3]

Great Britain

Ranges of Incomes per year	1938 Incomes	1938 Total Incomes in million £	1948 Incomes	1948 Total Incomes in million £
Under £ 250		2,467		2,439
£ 250— 499	2,000,000	679	8,650,000	2,929
£ 500— 999	670,000	455	2,295,000	1,519
£ 1,000—1,999	224,000	304	545,000	730
£ 2,000—9,999	98,000	360	209,000	729
£ 10,000 and over	8,000	175	11,000	125

1 Op. cit. pp. 188-190.

2 "Capital Levy," October, 1951, Bombay, Table I, p. 4. These figures relate to taxed income, from which agricultural incomes are mostly excluded.

3 Table III and IV in "Capital Levy," *Ibid.*, p. 7.

India

Ranges of Incomes per year	1938 Incomes	1938 Total Incomes in millions of Rs.	1948 Incomes	1948 Total Incomes in millions of Rs.
Upto Rs. 4,999	182,234	505	261,122	818
Rs. 5,000— 9,999	55,038	312	112,763	798
Rs. 10,000—14,999	16,913	151	38,692	471
Rs. 15,000—24,999	10,691	144	25,902	495
Rs. 25,000—49,999	5,622	115	15,226	607
Rs. 50,000—99,999	1,091	70	4,922	376
Rs. 100,000 and over	436	91	2,452	594

Whilst in Great Britain the number of income-tax payers has increased by 400 per cent in the decade 1938-48, the number of persons earning £2,000 and more has dropped from 3.5 to 2 per cent and their share in the total income declined from 12.5 to 10.8 per cent. On the other hand in India in the same decade, incomes over 25,000 that formed 2.5 per cent of total incomes paying taxes have increased to 5 per cent and their share in the taxed income has grown from 20 to 38 per cent. Growing inequalities in incomes within a country is likely to result in the growth of internal tensions leading to violent disturbances. Taxation may correct such inequalities to some extent in the existing economic order, but such measures need to be simultaneously supplemented by increased production.

International Comparisons

Mr. Colin Clark in the first edition of the "Conditions of Economic Progress" 1940 instituted a comparison between the real *per capita* income of the countries of the world, by reducing the different estimates of the national income of these countries to the same price level, the real income being expressed in the form of international units per head of the working population. The average real income over the period 1925-34 indicated that British India had 200 I.U.S. per head as compared with 1381 of U. S. A., 1069 of Great Britain, 343 of Italy and 259 of Bulgaria.

We have in a recent publication the following comparative statistics of selected countries for 1949:[1]

Country	Per capita National Income in Rupees	Country	Per capita National Income in Rupees
India (1948-49)	255	Pakistan . ..	240
Australia	3,070	Sweden . ..	3,520
Canada	4,210	U.K.	2,700
France	2,280	U.S.A. . ..	6,970
Japan	480	U.S.S.R. . ..	1,500

1 "Statistical Outline of India, 1953," issued by Tata Industries Ltd., (Dept. of Economics & Statistics), Table 6.

However deficient these statistical data may be in accuracy, it is obvious that India along with Pakistan stand at the bottom of the list. It will take a long time before we can reach the standard of life of even the comparatively backward countries of South East Europe.

The following table showing the changes in real income —total and *per capita*—of British India excluding the Princely States, estimated by the Statistical Department of the United Nations, mainly by deflating the current figures by indices of cost of living, reveal changes in the output over the last decade and a half:—[1]

National and per capita incomes in constant prices

Year	National Income in millions of Rupees	Population (000)	Per capita income in Rs.
1931-32	17,120	206,000	83
1945-46	18,530	242,000	77
1946-47	18,295	244,000	75
1948-49	16,958	246,000	70

It will be seen that as compared with 1931-32 real national income in India declined by 1 per cent by 1848-49, and *per capita* income by 16 per cent. This is evidently an indication of the economic prosperity brought by the second world war (!) In the last two years there have been signs of some improvement, but it is still doubtful if our production has reached the 1931-32 level.

National Income and Five Year Plans

The Planning Commission estimate the national income of India at approximately Rs. 9,000 crores in 1950-51. They calculate that it can be raised by over 160% in 25 years, and the *per capita* income doubled, if capital formation is stepped up from the beginning by as much as two-thirds of the additional income each year. This would involve a reduction in *per capita* consumption standards for a period of 10 to 15 years. On the basis of capital formation rising by about 20 per cent of the additional income each year, they plan to raise the total income to about Rs. 10,000 crores i.e., by 11 to 12 per cent above the estimated level for 1950-51. Proceeding from the level of Rs. 10,000 crores reached at the end of the first five year period, if the rate of saving as a proportion of total national income goes up from 5 per cent in the base year 1950-51 and 6¾ per cent in 1955-56 to about 11 per cent by 1960-61, and 20 per cent by 1967-68, the *per capita* in-

1 From Table 9, "Economic Survey of Asia and the Far East for 1950," op. cit., p. 113.

come can be doubled by about 1977, that is, in about 27 years, and consumption standards raised by a little over 70 per cent over the 1950-51 level.[1] The First Five Year Plan contemplates an outlay of 2069 crores in the public sector and an expected investment of about Rs. 383 crores in the private sector. A scheme which contemplates as a pious hope to bring about a rise of 70 per cent over the present level of consumption, and that too by five successive five year plans, the ensuing four of which are still in the womb of the future, with a complete absence of any details, involves such a heavy drain upon our forecasting ability as to justify our characterising it as food for the credulous. And with these mountains in labour, what would be the ultimate achievement?A rise in our consumption standards by 70 per cent over the present terribly low starvation level which can hardly be called a standard. There are already indications that the finance necessary for reaching the targets of production taken as a whole, is falling short of the estimates, that these estimates have to be revised in the upward direction, whilst the lower limits have not been reached. But even assuming that the production targets are achieved, the poverty of the masses will not enable them to reap the benefits of the increased production in the absence of a more equitable distribution, and such equitable distribution has very remote chances of being brought about under the continuance of an extensive sector of private enterprise with the profit motive and acquisitive instincts as the incentives to production.

We have already referred elsewhere to the growing inequalities among the agricultural population, and the equally significant increase in the number of the agricultural proletariat. We have also referred to the conditions of living of the industrial workers in towns. When we add to this the fact of deficient food supply, the picture becomes more gloomy. Millions are semi-starved and most of our population live on the margin of subsistence. We have a high infant mortality, malnutrition, low vitality and nothing by way of a reserve to fall back upon in times of scarcity or in cases of disasters like floods. The problem before our Government is the problem of equitable distribution as much as the problem of efficient production. What the Government can achieve, in the shape of making a full life possible for the teeming millions of India, will depend upon the extent to which it will realise

1 First Five Year Plan, pp. 20-21.

the need for a socially controlled plan for the regeneration of our agricultural and industrial economy.

A plan we already have with targets of production—but the problem of distribution will continue to offer a challenge not only to our government, but to statesmanship the world over, involving a process of trial and error, with no final solution in sight.

CHAPTER XXXI

PROBLEMS OF CONSUMPTION

The Place of Consumption in Economic Theory

Economic theory in the eighteenth and nineteenth centuries neglected all questions of consumption. Economists, while generally recognising that consumption is the sole end of production, regarded habits of consumption as a private affair of the individual, except in so far as they affected the production of wealth. They started from market demand to an examination of the laws of production, distribution and exchange of economic goods. Even so late a writer as Taussig regarded consumption as "an uncertain group of topics in which it is difficult to get beyond platitude of exhortation."[1] The mercantilism of the 18th century led to the view entertained in the 19th century by *laissez-faire* writers that production, with the pecuniary incentives behind it, was a crude test of economic welfare. Even when they discussed consumption, it was in connection with the distinction between productive and unproductive consumption, or the relation of thrift to capital accumulation, or the economic effects of the consumption of luxuries.

Consumption acquired a new prominence in economic theory with the rise of socialist thought which raised fundamental issues of justice and fairness in distribution, and involved a reconsideration of the problems of economic welfare. With the development of the marginal theory of value, consumption assumed a psychological meaning which at the same time became an integral part of the price analysis. The utility theory gave rise to the idea that economic welfare was a matter of "maximum satisaction," and was linked up with reform movements. During the first world war, as during the last, the consumer became the hero whose frugality and thrift would win the war. With the acceptance of planned economy consumption has acquired greater importance in recent years.

1 Taussig, "Inventors and Money Makers," p. 9.

Consumption, in fact, should be regarded as the beginning and end of the economic process. Human wants are the springs of all activity, and therefore of economic activity. Man has wants and he makes the efforts necessary to satisfy them. But consumption is also the end of all economic activity. When wealth has been produced, it can have no other function or purpose than to be applied to the satisfaction of human wants.

A theory of consumption involves standards of living. Organised scales of values direct our activities as consumers, and are manifested in the ways in which we feed, clothe and house ourselves, as well as in our amusements. A "standard of living" is not the same as the actual manner of living of a class or a community. It is an attitude towards, or a way of regarding, a given mode of living. It is the "scale of preferences," the plan for material living, which directs our expenditure into certain channels, "and satisfies our sense of propriety and decency as to mode of living."[1] Apart from this conception of the standard of living, there is also involved in a theory of consumption a descriptive study of the proportions of a family's income spent on consumers' goods like food, clothing, etc. Family budgets of this kind enable us to determine whether the manner of living of any class corresponds to a previously formulated conception of a minimum standard of subsistence, health and decency.

Analysis of the Standard of Living

When we analyse the factors that enter into the standard of living, we find three major elements: (a) there are those elements which are essential as possessing survival value for individual life —food, clothing, shelter, and medical services; (b) the "conventional necessities" or "prestige values" which indicate the existence of social groups and have survival value for the group, like a clergyman's coat, or the academic cap and gown. They are symbols to designate social status, and enable the individual to identify himself with the group; (c) there are those further elements which represent the group concept of welfare, including values which mark the peculiar bias or interest of the group, whether, puritanic or commercial.[2] It is obvious from such an analysis that where the income of any class or nation barely suffices for the satisfaction of the essentials of physical existence, it would be misleading to talk of a standard of life. It would be more appropriate, as in the case of India, to refer to a "standard of exist-

1 Hazel Kyrk, "A Theory of Consumption," p. 175.
2 *Ibid.*, p. 212.

ence." Our contention is borne out by a study of family budgets of workers in agriculture and industries. Messrs. Thomas and Ramkrishnan in their work on South Indian Villages give us data of family budgets of agriculturists of five villages from which we give below details concerning two villages.:[1]

(1) Vadamalaipuram
Agriculturists

	Rent Receivers			Cultivating Land Holders			Tenants and Labourers		
	Rs.	as.	%	Rs.	as.	%	Rs.	as.	%
Food	639	15	59.1	302	0	63.6	125	15	78.8
Tobacco and drinks ..	64	15	6.4	30	13	6.3	8	10	5.0
Fuel and lighting ..	36	2	3.2	11	0	3.1	3	2	2.0
Clothing and footwear	131	2	11.9	38	0	7.4	11	8	7.1
Household utensils ..	10	0	1.0	4	9	1.0	1	1	1.0
Other items	201	6	18.4	88	11	18.6	9	13	6.1

(2) Vunagatla

	Cultivating land holders			Tenants			Labourers		
	Rs.	as.	%	Rs.	as.	%	Rs.	as.	%
Food, tobacco and drinks	114	0	63	118	8	76	87	12	78
Fuel and lighting ..	4	8	3	2	4	2	2	4	2
Clothing and footwear ..	28	8	16	14	4	9	12	0	11
Household utensils and other items	33	0	18	20	4	13	11	4	9

A striking feature about these budgets is the large proportion spent on food by all classes.[2] As the income rises, the proportion spent on food falls. The working classes spend all their income on the bare necessities of life. These figures do not, moreover, take into account the indebtedness of the agriculturists, nor of the difficulties created by fluctuating prices and uncertainties of the rains.[3]

1 Op. cit., pp. 395 *et seq.*

2 The National Sample Survey in its report No. 1 (p. VI table 6) gives us an all-India table showing consumer expenditure per household based on investigations in 1080 villages, from which we extract the following figures:—

Consumer Expenditure in Rural Areas in percentages

Foodgrains (total) ..	66.31	Medical	1.27
Clothing	10.55	Domestic service, utensils and furniture ..	2.72
Fuel and light ..	3.25	Pan, tobacco and intoxicants ..	3.37
Footwear and toilet ..	1.73		
Amusements and education ..	1.26	Ceremonials, rents, taxes and miscellaneous ..	9.54
			100.00

3 The Labour Minister of the Central Government revealed in reply to a question in the Assembly some of the findings of the Agricultural Labour Enquiry Report. The average annual income of an agricultural labour family was Rs. 447, the annual expenditure per family was Rs. 468. 45 per cent of the families were indebted, the average debt being Rs 105. The main purpose for which debt was incurred was consumption, which accounted for Rs. 78 out of the debt of Rs. 105. (*Times of India*, 26th February, 1954).

These tables with regard to the agricultural population would indicate that the majority of our population live below a subsistence standard. Even with regard to factory workers there is reason to believe that their level of real earnings has not altered substantially from what it was in 1939.[1] Those whom we usually call the middle classes in India, and who are normally neglected in measures of economic amelioration, are obviously faced with the problem of rising costs and diminishing earnings. Statistical comparisons of the standard of living in India with that in other countries by a reference to *per capita* income and consumption of industrial commodities and products are bound to be misleading. Even a "standard of existence" would involve the adequate satisfaction of such primary needs as food, shelter and clothing, which is lacking in the case of millions of our people.

Standard of Living and Standard of Comfort

Marshall distinguishes between the standard of life and the standard of comfort, the former implies the individual's entire social and moral outlook, the latter suggests an increase of artificial wants, among which the grosser wants may predominate. Wants and activities are closely interwoven, and high wages may be a cause of, and in turn may be caused by a high standard of living. In a case like that of our own country, as we have already suggested, it would be a mockery to speak of a standard of life, and so long as the elementary needs in the shape of food, shelter and clothing are not met, all activities of the State directed to the supply of these needs by careful all-round planning are not to be regarded as an attempt to "improve" a standard, but as an attempt to secure an equilibrium between the elementary needs of life and their satisfaction. The public expenditure in other countries devoted to services like old age and widows' pensions, insurance, unemployment benefits and education, and which is a contribution to the real income of the working population, should be primarily diverted in our country to the increased production of necessaries and cheapening them by subsidies to the producer or more directly to the consumer. In examining the "standard of existence" in India, the first issue that arises is the relation between our food resources and the population.

Population and Food

In no country is it easy to determine the exact amount of food produced from year to year, and in India the difficulties are exceptionally great. The Agricultural Commission long ago pointed

1 For Family Budgets of Industrial Workers see chapter XXI.

out that information in the permanently settled areas is collected through reports which are "often mere guesses and are not infrequently demonstrably absurd guesses.[1] In the next place, the quantities of food produced are still less accurately determined than the amount of the acreage under crops. As Sir John Russell observed, the published figures are obtained by the use of an equation, namely, production area$\times$standard out-turn$\times$seasonal condition factor. "The standard out-turn is not the average yield over a number of years but the model value over a long period, and so is unaffected by high or low yields of particular years. Unfortunately the standard out-turn has not been redetermined for a long while, and it is very desirable that this should be done again. The seasonal condition factor can never be much more than a guess."

The Census Report of 1951 similarly observes: "It is not the least difficult among many baffling problems which Governments have to face in recent years, that they are frequently obliged to make decisions of far-reaching import, vitally affecting the economic and social life of the people; and yet they have to do this on the basis of data which are of uncertain accuracy, incomplete, and consequently inconclusive for purposes of resolving differences of opinion objectively.[2] What the Famine Enquiry Commission (Woodhead Commission) said about undivided Bengal applies largely today to the whole of India: "Our knowledge of the absolute magnitude of either production or consumption is subject to a wide margin of uncertainty—so wide that it is larger than the magnitude of our shortage."

The First Round Report of the National Sample Survey initiated by the Government of India in 1949 arrived at the conclusion that the production of foodgrains per household during 1950 was 19.86 maunds, whilst the consumption per household was 26.4 maunds. There is thus a negative balance of 6.54 manuds per household. There must have been, therefore, an error in the estimates of consumption by the National Sample Survey Committee or in the estimates of production. The official figures of foodgrains production published by the Ministry of Food and Agriculture for 1948-51 gave an average of production which compared with the consumption figure of N.S.S. gave a negative balance of 10 million tons, which the N.S.S. characterised as "absurd."[3] The Committee discard the official figures of produc-

1 Report, p. 527.

2 Census of India, 1951, Vol. I, p. 137.

3 National Sample Survey, First Round, December, 1952, p. 77.

tion; but a new survey would have to be undertaken to sit in judgment upon the consumption figures of the National Sample Survey.

Agriculture being the most important source of wealth of our people, these defects make it impossible to estimate accurately to what extent our resources keep pace with our growing population. Sir John Russell categorically observed by reference to the table which we reproduce below, that "the official figures as they stand show that the acreage under food crops unlike that under cash crops has not kept pace with the growth of population; on the contrary there is an actual fall in the acreage per head."[1]

Comparing the areas of land under different crops between 1915-16 and 1934-35 in British India, he gives us the following summary, along with another table:—

Summary	Thousand acres
Increase in net area sown	8,360
Increase in food crops	4,132
Increase in non-food crops	4,960

Area per head of population in British India

	1903-04 to 1907-08	1908-09 to 1912-13	1913-14 to 1917-18	1918-19 to 1922-23	1923-24 to 1927-28	1928-29 to 1932-33
Net area sown acre per head ..	0.883	0.906	0.918	0.879	0.868	0.841
Area under food crops per head ..	0.829	0.862	0.873	0.833	0.803	0.785
Acres under food crops per head omitting sugar ..	0.818	0.852	0.862	0.822	0.792	0.774
Acres under non-food crops per head ..	0.053	0.043	0.045	0.045	0.065	0.057
Population in millions	237.6	343.8	245.3	246.9	259.2	271.5

Thus, while the population during these 30 years increased by 34 millions, acreage under food crops increased by 4 million acres.

The Planning Commission point out that "the Indian economy has been more or less stagnant and has failed to meet the demands of a rapidly growing population. . . . Sown area per person has shown a steady tendency to decline. For British India sown area per person went down from 0.88 acre in 1911-12 to 0.72 acre in 1941-42. For 1948, i.e., after Partition, the estimated sown area per person in the Indian Union works out at 0.71 acre."[2]

According to the Census Report of 1951 during the thirty year period, 1891-1921, cultivated land *per capita* moved up and down

1 Report, pp. 15-16.

2 "Draft Outline of the First Five Year Plan," 1951, p. 14. Sir John Russel estimates the *per capita* sown area at less than .8 acre, "which is about one-sixth of what would be required to produce our present British dietary at Indian level of yield." ("Food Production Problems in India" in *International Affairs*, Vol. XXVII, 1952, p. 15.)

slightly, and was a little higher at the end than at the beginning. In the following thirty years, 1921-51, it came down substantially by nearly one quarter of the 1921 level. In spite of an increase in the double cropped area from 99 lakh acres in 1891 to 125 lakhs in 1951, production has not kept pace with the rate of growth of population.

The same evidence of decline in *per capita* irrigated area is to be found in the following table:—[1]

	Irrigated area per capita in cents 1891	1921	1951
North India districts	19	25	19
South India districts	18	16	14
West India districts	7	8	8
Central India districts..	2	2	2
All districts ..	16	18	14

It is difficult to ascertain how far the total production of food has kept up with the population. The following table which we reproduce from Dr. Mukerjee's book shows to us the trend of food production in respect of quantity and quality in relation to population increase in undivided India:—[2]

Index numbers of variation of population and food supply in India[3] (1910-11 to 1914-15=100)

Average of five years	Population	Food Production Weighted	Food supply available for consumption (unweighted)	Excess or deficit of food supply index number in relation to population index number
1920-21	99	99	99	0
1925-26	101	121	113	+12
1930-31	107	126	123	+15
1935-36	121	115	122	+ 1
1936-37	123	123	128	+ 5
1937-38	125	110	118	— 7

The difference between the indices for population and food supply has been gradually becoming narrower, as will be seen from the table, and this is a definite indication of deterioration in the food position. There was a tendency towards decrease in the annual exports of food crops from India. This was offset by the import of food purchased with the help of our cash crops.

There was an actual deficit of 15 per cent in the aggregate food production in the year ending 1937-38, while the food supply

1 Census of India, 1951, p. 146.

2 R. Mukerjee, "Food Planning for 400 Millions, p. 18.

3 Weights are assigned according to protein values. Food supply available for consumption is computed after deducting exports, seeds amounting roughly to 1 million tons per every 200 million acres of foodgrains and 10 per cent wastage, and adding imports of sugar and cereals.

actually available for consumption diminished by 7 per cent as compared with 1910-15. Mukerjee calculated, assuming that the daily calorie requirements of the average Indian are 2,800 calories, which allows for 200 calories to be wasted in the kitchen and the table, that India (pre-Partition) fell short of food for 48 millions on an average. The average deficit was 423 calories in each man's daily ration. The deficit in food supply was indicated by the following figures:—[1]

India's population in 1935	377 millions
India's food needs	321.5 billion calories
India's food supply	280.4 billion calories
India's food shortage	41.1 billion calories

Still more significant was the fact that there was not merely a deficit in the quantity of food production in relation to the increase in population but a steady deterioration in the quality of the foodgrains consumed by the people. Between 1910 and 1938 there was a steady increase in the production of inferior foodgrains like jowar, barley and bajra at the cost of rice and wheat which have greater nutritive quality, as can be seen from the following table:—[2]

Index Numbers of the Output of Cereals showing Percentage Variations

	1910-15	1915-20	1920-25	1925-30	1930-35	1935-38	1910-38
Superior Cereals							
Rice	100	114.0	108.4	107.2	110.2	103.5	+ 3.5
Wheat	100	96.2	93.4	93.0	97.8	104.2	+ 4.2
Inferior Cereals	**1910-15**	**1915-20**	**1920-25**	**1925-30**	**1930-35**	**1935-38**	**1910-38**
Jowar	100	157.4	167.0	210.8	207.8	209.7	+109.7
Barley	100	224.2	202.6	172.2	173.4	157.1	+ 57.1
Bajra	100	114.0	105.0	126.0	125.0	125.0	+ 25.0
Maize	100	114.0	100.0	106.0	112.0	105.0	+ 5.0

The whole of the inferior type of cereals serves the purpose of a self-subsisting economy of a population proverbially poor; what is more significant from the point of view of the food problem in India is the steady deterioration in the quality of the foodgrains.

It is worth while finding out the reason for this change which has an immense bearing on the health and vitality of the people. There can be no doubt that one factor in the situation has been the comparative cost of cultivation of wheat and rice, on the one hand, and crops like jowar and bajra on the other hand. Another factor is the increasing demand for the cheaper cereals by a popu-

1 R. Mukerjee, "The Food Supply," Oxford Pamphlets no. 8, 1942, p. 13.
2 *Ibid.*

lation which has been living on the margin of subsistence. This is likewise evidenced by the fact that the food composition of the cultivators is determined by the proportion of cereals grown from season to season—rice and maize being used in September to November, a mixture of jowar and barley with gram or with bajra in the months between December and April, wheat being used in the mixture between May and August. There is still another factor to be taken into account, when we face this problem of the relatively large acreage under inferior cereals. The growing dependence of a population, used to a self-subsistence economy in the past, on world prices and the fall in the price of the staple food crops in the world market largely influence the trend of cultivation—a trend that may be emphasised by the frequent failure of crops and recurrence of droughts.

It is evident that the food position of India is relatively worse, judged by the proportion between the food production and population and also by reference to the nutritive quality of the cereals.

Speaking generally Dr. Aykroyd, the Director of Nutrition Research Laboratories in Coonoor, South India, said in an article contributed to the *Indian Journal of Social Work* in 1942: "To the nutrition worker the food situation in India is thoroughly unsatisfactory in normal times. A nation-wide 'grow more food' campaign would have been appropriate in 1938 before the war started and will be appropriate in 1945 when, let us hope, the war will be over. The majority of the population lives on a diet far remote from the most moderate standards of adequate nutrition. If India depends entirely on what she can herself produce, a very large increase in the production of various foods is necessary to raise the existing standard to a satisfactory level. Some of these may be roughly indicated as follows: cereals, 30 per cent increase; pulses, 100 per cent; milk and milk products, 300-400 per cent; meat, fish and eggs, several hundred per cent; vegetables, particularly green leafy vegetables, 100 per cent or thereabouts."

The relation between the growth of population and increase in food production, it has been said, can be more accurately gauged by approaching the problem regionally. Though the whole of the country is predominantly agricultural, agriculture is carried on under diverse conditions. A regional approach is, therefore, a useful supplement to the study of conditions on an all-India basis. There are regions which yield a single crop in a year, while there are others that yield four crops annually. An attempt has been made in a publication to study the question from

the point of view of separate regions, which clearly showed that except in the three regions of Brahmaputra Valley, Gujarat and Orissa, there was no increase in area under cultivation corresponding to increase in population.[1]

Under ordinary circumstances, an increase in the economic opportunities of a region is generally followed by an increase in population and *vice versa.* But in the case of India, we seem to have reached a stage when without any tangible evidence of an increase of economic opportunities, agricultural or industrial, there is a definite trend towards increase of population upto the limit of actual starvation.

There is ample evidence that whilst the population has gone on increasing during the last thirty years, both the area under agriculture and the volume of production of foodgrains show a tendency to decline.

The Census Report of 1951, from a study of the land under cultivation of eight "natural" divisions and some of the districts of five other divisions, covering 120 million people, observes that the acreage of net area sown was 92.7 million in 1921, 94.3 million in 1931, 95.8 in 1941 and 99.1 million in 1951. Dividing the area of cultivated land by the population, we obtain the area of cultivated land *per capita*, as indicated in the following table:[2]

Area of cultivated land per capita in cents

1921	111	1941	94
1931	104	1951	84

The Report concludes that during these 30 years the share of food and other produce of cultivation available to each individual is diminishing. The Report supplies similar tables for double cropped land and irrigated land:[3]

Double crop area per capita (in cents)

	1891	1921	1951
North India Districts	18	19	15
South India Districts	7	8	7
West India Districts	4	5	4
Central India Districts	4	5	6
All Districts ..	12	13	10

Irrigated area per capita

	1891	1921	1951
North India Districts	19	25	19
South India Districts	18	16	14
West India Districts	7	8	8
Central India Districts	2	2	2
All Districts ..	16	18	14

1 N. V. Sovani, "Population Problem in India-A Regional approach," 1942.
2 Census of India, 1951, Vol I, p. 141.
3 *Ibid.*, p. 146.

The Report concludes that it is "an all pervasive fact" that whilst the area of cultivated land and double crop and irrigated area decreased since 1921, population during the same 30 year period increased very much faster.

The same trend is illustrated by the following table showing decline in food consumption in India:—[1]

Estimated availability for consumption in India

	Balanced Diet Requirement per adult according to Nutrition Advisory Committee in oz.	Pre-war average 1934-38[2] in oz.	1949-50 in oz.	1950-51 in oz.
Cereals ..	14	16.3	13.7	13.0
Pulses ..	3	1.9	1.9	1.9
Leafy vegetables ..	4	3.7	2.0	1.6
Other vegetables ..	6			
Ghee and vegetable oil	2	0.25	0.35	0.36
Milk and milk products	10	7.3	4.9	4.8
Meat, fish, eggs ..	4	0.6	0.4	0.4
Fruits and nuts ..	3	3.3	1.9	1.9
Sugar and jaggery ..	2	1.6	1.4[3]	1.5[3]

In 1933 Sir John Megaw undertook an elaborate enquiry in connection with public health aspects of village life in India. A questionnaire was distributed among several hundred village doctors in villages selected from every province of British India. The enquiry revealed that the average size of an Indian family was just about 5.5. The report drew attention to the fact that the conclusions would have been more unfavourable, if the enquiry had been undertaken by men with European experience. In many cases in which the food supply was reported to be sufficient, evidence in reply to other questions indicated that this was far from being the case. But even on the low standards adopted by the doctors, the enquiry revealed that only 39 per cent of the people were well-nourished, 41 per cent poorly nourished and 20 per cent were badly nourished.

The conclusions of the Medical Survey are significant: (1) India has a poorly nourished population. (2) The average span of life is less than half of what it might be. (3) Periods of famine or scarcity of food have been occuring in one village out of every five during a ten-year period in which there has been no exceptional failure of the rains. (4) In spite of the excessively high death rate, the population has been increasing much more rapidly

1 S. M. Roy, "Food Consumption in India," in *Agricultural Situation in India*, May, 1952, p. 87.

2 Undivided India.

3 In terms of gur.

than the output of food and other commodities. "It is clear," said the Report, "that the growth of population has already begun to outstrip the increase in the production of the necessities of life, so that even the existing low standards of economic life must inevitably become lower still, unless some radical change is brought about. The outlook for the future is gloomy to a degree, not only for the masses of the people who must face an intensified struggle for bare subsistence, but also for the upper classes whose incomes depend on the production of surplus of crops and other commodities."[1] The position today after two decades is possibly much worse.

Food Policy during War and after

There was nothing like a food policy till 1939, when the outbreak of the war focussed the attention of the Government on the food problem. The need for exports of foodgrains to the allies and also to satisfy the internal demand compelled the Government to take some half-hearted measures of price control and to encourage increased food production.

It is difficult to estimate how serious the food shortage was in the years of war. The Member of Education, Health and Lands in July, 1942, estimated the net deficit for 1941-42 at·2 million tons of rice and 400,000 tons of wheat. The Food Production Conference which met in Delhi in April, 1942, had recommended that "as an insurance against the shortage of staple foods, and with a view to improving the nutrition of the people, all available lands adjoining homesteads should be used for the production of vegetables and quick growing fruits, such as papayas, bananas, melons and green fodder crops for increased production of milk."[2]

Mr. J. D. Tyson, Secretary, Education, Health and Land Department, in the Legislative Assembly Meeting on 9th November, 1944, gave the following figures. The total acreage under all foodgrains in the three years before the war was 195 million acres. After two years' progress of the Grow More Food campaign it was 206.3 million acres. The pre-war average of all foodgrains yield was 55 million tons. It increased to 61 million tons in the second

1 Quoted by Shiva Rao in "The Industrial Worker in India," pp. 61-62.

2 The tragedy of the Bengal Famine of 1943 did shake the complacency of the British Government and a positive food policy was thought out by the Food Department. The Food Member, Sir J. P. Srivastava, in a debate in the Central Legislative Assembly on November 2nd, 1944, informed the House that he proposed to set up in the Food Department a food planning section with a view "to study the whole question of a long range food policy and a planned development food economy in India. The people of this country could look forward to having more food, better food and balanced food." *Indian Information*, November 15th 1944.

year of the campaign. The rice production, however, declined to 24.8 million tons from 26.5 (the three years pre-war average) in the first year of the campaign, in spite of the increase in area by over a million acres, "owing to natural calamities," but increased to 30.6 million tons in the second year of the campaign. The yield of rice was the highest on record. It was 4 million tons over the production of the pre-war period and it was twice the figure we used to import from Burma."[1] And yet in the very year, 1943, to which the official organ refers, Bengal passed through a famine which took a toll of 3½ million lives, according to the report of the Anthropological Department of the Calcutta University, not to speak of famines in other parts of India, like Bijapur, Cochin and Travancore.

The Bengal famine led to the appointment of a Food Grains Policy Committee headed by Dr. Gregory. A food policy was adopted in 1943-44 and continued till 1946-47. The shortage of food caused by the Japanese occupation of Burma and a succession of droughts and floods made it necessary for Government to divert land from cash crops to food crops and to encourage intensive cultivation through facilities for irrigation, improved seeds and manures and improved technique. Efforts were also made to bring more land under cultivation. Province-wise targets of internal production were determined, as well as the volume of surplus or deficit for each Province. Schemes were prepared by Provincial Governments which were to be financed by the Central Government through loans and grants to increase the output. Controlled distribution of foodgrains was also undertaken in selected urban and rural areas at fixed prices. The rationed population was about 145 million in 1947.

Commenting on the results of the Grow More Food campaign, which had been inaugurated a few years earlier, the Foodgrains Policy Committee (1947) observed that "the measures which were undertaken were doubtless in the right direction, but the objectives were too diversified, the effort was inadequate, and in most areas the necessary vigour and drive was lacking."[2] They recommended a radical revision of approach and a new policy of food production. Following the recommendations of the Committee, the Grow More Food policy was continued for another five years, and put on a more systematic basis, targets were fixed and allocated to different Provinces. A programme of intensive

1 *Indian Information*, December 1st 1944.
2 Final Report, 1948, p. 3.

cutivation of areas with perennial or assured water supply was adopted.

The Partition of the country in August, 1947, aggravated the food situation. And yet, as a result of agitation against controls, specially by Gandhiji, a decontrol policy, adopted in December, 1947, led to the abandonment of controlled distribution, except in a few important urban centres. This policy was a disastrous failure, leading to a rapid rise in food prices. Government was compelled to reintroduce controls. Crop failures, the drain on foreign exchange resources and the high cost of food imports led Government in March, 1949, to proclaim a policy of self-sufficiency in food by March, 1952. A Commissioner for Food Production with wide powers to co-ordinate State plans was appointed, assisted by a Board of experts. Short-term measures to encourage intensive farming, medium-term measure for reclamation of land and cultivation of fallow land, and long-term measures for multi-purpose river valley projects were adopted. The Centre provided Rs. 6 crores to the States during 1949-50. An extensive propaganda to change the food habits of the people, particularly the substitution of cereals by sweet potatoes, tapioca and bananas was launched.[1]

In spite of these efforts, food production did not substantially increase, due partly to administrative inefficiency, partly to failure of crops, and partly to lack of co-operation by the people. The severe crop failure in 1950 led Government to reduce the statutory rationing commitment from 355 towns and other selected rural areas to 22 industrial towns, and the size of the ration from 14 oz to 12 and subsequently to 9 oz, fearing that otherwise the entire rationing system would break down. The wheat loan from U.S.A. in the middle of April, 1951, enabled Government to restore the ration to 12 oz per head per day.

The Foodgrains Procurement Committee ascribe the failure of the policy to "the confusion and even contradictions in the objectives of food policy," like the attempt to grow more food with controlled prices of foodgrains and uncontrolled prices for cash crops by the same producers, the desire to feed "the vulnerable sections of the population" and simultaneously to reduce imports and rationing commitments without proper attention being paid to the implications of such a policy. "The result of the confusion of these objectives is reflected in food administration which

1 Shortly after the commencement of this new policy, the acute shortage of cotton and jute led to the integrated programme of simultaneous increase of food, cotton and jute in June 1950.

does not know exactly what they wish to achieve."[1] This lack of a consistent policy was responsible for the failure of procurement which did not come up even to 10 per cent of the total domestic production, despite a decade of control. The Grow More Food Campaign achieved no substantial results in spite of the expenditure of crores of rupees.[2]

Estimates of Deficit

The Planning Commission estimate the deficit in food, on the basis of 13.7 oz. per adult per day at 7 million tons in 1956 calculating the total number of adults on the basis of 86 per cent of the population. This calculation leaves out deficits in the other components of a dietary standard which we shall refer to further on. The calculation of 13.7 oz of cereals is moreover an underestimate, arbitrarily selected on the availability of cereals in 1950, which was much less than in the pre-war years. A calculation of deficit may not be depended on as a constant factor for guidance in the determination of a future policy, as it may be liable to fluctuation of a large size with the vagaries of the weather. The actual deficit may be very much greater when deficits in other components of a balanced diet may require a large intake of cereals per adult.

We need not be very jubilant at the sudden announcement that the target for food production fixed by the Planning Commission for 1955-56 has already been reached, and that this country which was a deficit country in food production for years has been converted over night into a surplus country. A famine on a large scale, the ever recurring floods, a fall in food prices might again re-create the problems with which we were faced in the past. But more than this, the question has still to be asked and answered: What are the food requirements of our population on the basis of the actual availability of cereals which was 16.3 oz per adult per day in 1934-38, whether the present production can meet the growing population today on the basis of the figure for 1934-38, and whether the restoration of the pre-war level in 1956-57 which the Planning Commission base on a calculated requirement of 13.7 oz. per adult, would be adequate to the needs of a healthy and efficient population.[3]

1 Report, pp. 6-9, quoted in *"Economic Trends,"* July-September, 1952.

2 The total expenditure sanctioned for the G.M.F. campaign (1943-51) amounted to Rs. 67.54 crores.

3 It may be noted that the Planning Commission arrives at the figure of 13.7 oz per adult on the basis of availability of cereals in 1950. Similarly while some experts consider that seed requirements, wastage in storage and losses in transit amount to 25% of the total production, the Planning Commission consider 12½% an adequate allowance.

Nutrition Problems

Till 1938, 50 surveys were made of the diet of the people in different parts of India and these surveys showed more or less uniform results. They showed that rice is the staple food in Madras, Bengal, Assam, Bihar and Orissa; 90 per cent of calories of peasant diet were derived from rice. Green leafy vegetables per day in the families studied were one-third of an ounce per "man value." One-half of the families drank no milk. 28 per cent drank more than one ounce per head per day. Animal protein taken in was very low. The average total calories were found to be insufficient to meet normal requirements.

Some Surveys

A diet survey of some families and institutions in Calcutta was made by Drs. Wilson, Bashir Ahmad and D. N. Mullick, in 1936. It included ten middle class Bengali Hindu families, a male hostel and two orphanages. The survey showed that all the diets analysed fell below Western standards. The doctors observe, "Assuming that the Western standard is not rigidly applicable in India and this is probable in the case of fat, the degree or divergence between the figures collected here and the accepted standard is too great to be dismissed, as falling within the range of what constitutes a good diet or what the human species can adapt itself to." They arrived at the following conclusions: "(1) The diets analysed in this survey are poor in total and animal protein, total and animal fat, calcium, and to a lesser extent phosphorus. (2) The minimum cost in Calcutta at current prices to-day of a diet which approaches to within a reasonable degree the Western standard is somewhere in the region of annas 4.4 to 5.6 per man value per day. Under present conditions, this is beyond the means of most."[1] The doctors pointed out that an increase in the consumption of milk products would improve the diets and would be the easiest to introduce and in the long run the cheapest. They also recommended increased consumption of *ata* in the rice-eating districts.

Similarly, Drs. Aykroyd and Krishnan of the Nutrition Research Laboratories at Coonoor undertook diet surveys in South Indian villages in 1936. They investigated into the diet of 44 families including 274 persons over a period of 20 days. They divided the families into four groups, and they found that the calorie intake in groups I and II was definitely insufficient, and

1 *Indian Journal of Medical Research*, Vol. XXIV, 1936-37, pp. 171-72.

in group III, though the mean approached the standard requirement, it concealed undernutrition in a considerable proportion of families. They found, therefore, that one-third to one-half of the group of 44 families studied did not consume enough food during the period of investigation. They also found judging by conventional standards that the protein and fat intake was low. There was a complete absence of protein and fat of animal origin . The calcium intake fell below conventional requirements in groups II, III and IV. Drs. Aykroyd and Krishna observe. "It is difficult to say how far the families studied were typical of South Indian peasants in general....It is clear that if group I. which may without exaggeration be described as half-starved, is representative of a large group, the problem of malnutrition in South India is more serious than has yet been realised."[1]

That the pre-war food supply in India was insufficient for the country's requirements from a nutritional point of view is apparent from the following table:—[2]

Pre-war Food Supply in India
Kilograms per year

Total Kgrms.	Cereals	Roots & Tubers	Sugar	Fats	Pulses	Fruits & Veget-ables	Meat	Milk
296	138	8	15	3	23	37	8	64

Calories and Proteins from Pre-war Food Supplies in India

Total Carbries	Cereals	Roots & Tubers	Sugar	Fats	Pulses	Fruits & Vegetables	Meat	Milk
2,021	1,306	37	163	71	210	41	37	156

Out of the available total protein of 56 grams per day, 9 was animal and 47 vegetable.

Even in pre-war days the calorie intake available was much below the quantitative requirements, not to speak of qualitative needs. There was, evidently a severe degree of starvation and malnutrition. The war made the situation worse, and even in the post-war period it is scarcely better. The following table gives us a comparative view of the calorie content of our national average food supplies, pre-war, post-war, and targets we hope to reach:—[3]

1 *Indian Journal of Medical Research*, op. cit. pp. 667 *et seq.*
2 Tables 1 and 2, appendix III, "World Food Survey," F.A.O. 1946, pp. 35 and 38.
3 Appendix IV, "Second World Food Survey," 1952, p. 49 and, "Agriculture in Asia and the Far East," op. cit. p. 62.

Calories and Protein content of food supplies per head per day

	Calories	Total protein (grams)	Animal protein	Pulse protein
1934-38	1,970	56	8	12
1948-51	1,620	43	6	12
1951-52	1,620	42	—	11
1956-57 (estimate) ..	1,730	46	—	13
1960 target	2,000	53	7	15

We shall not, therefore, assuming that these modest estimates do not go awry, even in 1960 be better off from a nutritional point of view than in the pre-war years.[1]

Balanced Diet

Attention is also being directed in our times to the necessity of a balanced diet. Sir Robert McCarrison has shown by patient study how the stamina and physique of the rice eating population of Bengal and Madras are far below those of the Northern people who live on wheat, milk, vegetables, fruit and meat. Dr. Aykroyd enables us to compare a typical "ill-balanced" Indian diet with a well-balanced diet which approaches closely the 'League of Nations' standard:—

Ounces per consumption unit per day

Food	Ill-balanced diet	Well-balanced diet	Nutrition Advisory Committee's balanced diet[2]
Cereal	23	17	14
Pulses	0.5-1.5	3	3
Milk	None or negligible amount	8	10
Leafy and other vegetables ..	2.5-6.0	6	10
Fruit	negligible	2	3
Fats and oils ..	less than 1.0	2	2
Flesh foods ..	0.5-1.0	2-3 if no milk is included	4

Dr. Aykroyd maintains that whereas the ill-balanced diet will cost Rs. 2 to Rs. 3 per adult per month, the cost of the well-balanced diet may be established at Rs. 4 to Rs. 6 per adult per month. Taking a family to consist of four, the annual expenditure on a satisfactory diet will be Rs. 240, and more if allow-

1 The Nutrition Advisory Committee (1944) laid down the following level of calorie requirements:

Calorie Requirements

	Man	Woman
Light or sedentary work	2400	2100
Moderate work	3000	2500
Very hard work	3600	3000

According to the Second World Food Survey the level of calorie supplies was 1700 in 1949-50 as against the estimated requirements of 2250—a deficit of 24.4% (F.A.O., November, 1952, p. 13).

2 Adapted from "Food and Population," Central Food Technological Research Institute, Mysore, 1952, p. 50.

ance is made for 8 ounces of milk daily on the part of the children. The enquiries into family incomes have revealed that a well-balanced diet is evidently beyond the means of a large section of the population.[1]

Dr. Aykroyd in an article contributed to the *Indian Journal of Social Work* referring to the problem of nutrition in India quoted from a document bearing on England in 1935: "Amongst the lowest income groups are still some who suffer from actual hunger. Immediately above is a much larger group estimated to cover between 20 and 25 per cent of the population, who can afford enough food to fill their bellies, but cannot afford a diet of the type and quality now known to be essential as a safeguard against malnutrition and disease. On the next step upward comes another large group which commands enough purchasing power to obtain an adequate diet for the whole family, provided that this purchasing power is spent on the lines suggested by the Report of the British Medical Association Committee on Nutrition."

The same groups exist in India as Dr. Aykroyd points out. But the proportion of population falling into each is very different. The lowest group includes a much greater percentage. It is impossible to estimate accurately the percentage of population in India which "suffers from actual hunger." But "certainly it is a large one," states Dr. Aykroyd. Over 70 diet surveys of groups of families, both urban and rural, "have been made in various parts of the country within recent years, and in about 30 per cent of the groups, average daily calorie intake per consumption unit was below 2,300, that is, below any reasonable standard of requirements. In various surveys in villages and in industrial areas, an approximately similar proportion of families was found to be underfed by the same standard. These observations cannot legitimately be generalised into a statement about the extent of undernutrition in India, because the sample of the population—about 1,500 families—investigated was small, and cannot in a statistical sense be taken as typical of the country as a whole. But there can be no possible doubt that many millions in India never get enough food to eat, and this fact is of fundamental importance in connection with agricultural policy. Enough food takes precedence over the right sort of food."[2]

1 The Punjab Public Health Department Enquiry 1939, and Closepet Health Training Centre Survey in Mysore in 1935.

2 "Problem of Nutrition in India" in *Indian Journal of Social Work*, December, 1941.

We have in the next place, the group which can afford enough food to fill their bellies but cannot afford the diet of the type and quality now known to be essential as a safeguard against malnutrition and disease. This includes the classes whose diet resembles the ill-balanced diet, costing Rs. 2 to Rs. 3 per consumption unit per month. A proportion higher than 10 to 25 per cent of the population of India falls into this category, though it may be difficult to arrive at any precise estimate.

Dr. V. N. Patwardhan, the Director of Nutrition Research Laboratories, in his work on Nutrition in India, which we have already quoted, discussing the poor Indian dietaries, on the basis of material collected in 139 surveys, spread over almost every part of the country, observes that the surveys include low income groups, agriculturists and agricultural labourers, also a few industrial labourers. The pattern of the diets indicates extremely small quantities of milk and milk products and flesh foods. The vitamin content of the poor Indian diets must be also considered inadequate. One of the commonest deficiencies is that of vitamin A. "Recent surveys have shown that in urban and semi-urban areas calorie intake has decreased owing to the fact that cereals are rationed and the amounts procured by different provinceal governments plus those allotted by the Central Government are not enough to provide even 14 ounces per head as recommended by the Nutrition Advisory Committee. Substitute foodstuffs are also in short supply and are costly. There has been therefore an undoubted deterioration in the quality of diets. This deterioration has been more marked among the lower middle and middle classes of population, particularly the people with salaried incomes, for their incomes have not proportionately increased."[1]

Deficiency Diseases

It would appear that during the last few years the consumption of protective foodstuffs has suffered so considerably that malnutrition is on the increase. Sir John MeGaw's Report stated that rickets was far more prevalent in Bengal than elsewhere as a disease caused by deficiency in the diet. The total number of cases in India of rickets was 2.3 million in 1933. Night blindness, another diet deficiency disease, was extremely common in

1 Patwardhan, op. cit., pp. 143-152. For the Bibliography of investigations in Diet, Income, Expenditure and Standard of Living in India between 1930 and 1950, see "Enquiries into Household Standards of Living in Less-developed Areas," United Nations, 1951, pp. 95-129.

the U.P. and claimed 3.6 million victims. The population of India is said to be highly susceptible to tuberculosis. "Tuberculosis," Sir John MeGaw observes, "is a disease which has very special importance in India for the reasons that (1) it is likely that many villagers have never come in contact with infection and therefore are virgin soil on which the disease is likely to thrive, (2) the infection is being steadily spread from the large towns to the villages, (3) the disease constitutes a reliable index of the standards of life which prevail in countries in which it has become established for long periods of time; it spreads rapidly amongst ill-nourished and badly housed population, and correspondingly diminishes when the people are well-fed, well-housed and cleanly in their habits."[1]

Dr. Marrack, writing in 1942, gives us the following table showing the chemical composition of pre-war Indian diets:—[2]

Calories and Gm. of Protein, Fat and Calcium in Indian diets per "man value" per day

	Calories	Protein	Animal Protein	Fat	Calcium
South India, Trichinopoly ..	2,399	62.7	—	26.9	0.31
Assam Coolies	2,181	58.8	2.7	12.0	0.173
Nilgiris Tea Plantation ..	2,140	43	—	18.0	9.19
Travancore „ ..	2,380	32	—	21.0	0.46
Paharis	1,368	37.3	0	3.5	0.16
Santals	2,178	76.0	1.7	13.9	0.47
Calcutta, Well-to-do	2,787	94.0	47.7	86.5	0.79
Hindu, urban Punjab	2,319	69.8	9.9	49.2	0.77
Hindu, rural „	2,720	81.4	8.5	53.1	0.81
Sikh, urban	2,776	87.9	16.0	59.2	1.00
„ rural	2,904	89.4	13.0	58.6	0.99

The low intake of proteins and fats evidenced by this table has been responsible for deficiency diseases. Unpublished data of the Nutrition Research Laboratories show the prevalence of such diseases as below:—[3]

Incidence of deficiency states found in repeat surveys

Locality and year	Number surveyed	Phrynoderma	Angular stomatitis	Bitot's spots
Coonoor		%	%	%
1937	777	8.6	8.7	2.1
1949	566	20.0	1.0	3.4
Orissa				Xeroses
1942	11,601	14.6	16.5	2.7
1945	7,711	4.1	14.6	2.7
1947	700	8.0	7.0	7.8

1 Quoted by Shiva Rao, op. cit., p. 75.

2 Marrack, "Food and Planning" p. 116.

3 Orissa Government: Department of Public Health Report, 1947, quoted in "Nutrition in India," Patwardhan, 1952, 170.

It has been observed that as rice forms such a large proportion of the diet of the people deficiency of vitamin D_1 in the rice eaten is not made up from other sources, with the result that beri-beri is prevalent particularly in towns. Dr. Patwardhan gives us the following table showing the prevalence of beri-beri in certain districts of Madras State:—[1]

Cases of beri-beri in Madras State

Year	Five districts of Andhradesa	Twelve other Districts
1945	15,664	754
1946	16,782	683
1947	27,210	854
1948	28,281	907
1949	29,061	444

Endemic beri-beri is due to dependence on rice, family cooking practices and defective dietary habits of the people. A majority of cases occur among the poor sections due to faulty cooking practices which remove a major portion of thiamine in rice. People in the endemic areas prefer raw to parboiled rice. The problem is capable of solution by making available at cheaper prices the common Indian pulses which the poor cannot afford to buy on account of high prices.[2]

The Milk Problem[3]

The daily consumption of milk per head was estimated at 6.6 ounces based on the population figures of 1931 and the cattle census of 1935. On the bases of 1940 cattle and 1941 population census this figure was reduced to 5.8 ounces for pre-Partitioned India. According to 1951 cattle census, the average *per capita* consumption of milk and milk products in the Indian Union works out at 5.5 ounces.

Milk is a foodstuff of particular importance in a country in which the diet is predominantly vegetarian and the consumption of meat very small. A large percentage of the population avoids flesh food and eggs on religious grounds. The majority, however, are prevented from using meat and eggs on account of their poverty and the relative scarcity of such foods. The value of milk for children is recognised even by the illiterate classes. But over large parts of the country, whole milk is scanty and beyond the reach of the poor.

It is also found that the consumption of milk and milk products is lower in urban than in rural areas. An enquiry

1 *Ibid*, p. 230.
2 *Ibid*, p. 233.
3 We have already touched on some aspects of the milk problem in chapter X.

conducted in nearly 2,500 working class families in Bombay City by G. Findlay Shirras showed that the quantity of milk consumed per head per day was less than half an ounce. This was supplemented by 0.05 ounces of ghee. A similar enquiry among 87 families of jute mill workers in Bengal gave a daily consumption of just under one ounce of milk and 0.10 ounces of ghee. The following table which we obtain from Dr. Wright's report is of interest:—[1]

Milk Production and Consumption by Provinces

Province	Daily production per head in ounces	Daily consumption per head in ounces
Bengal	3.1	1.9
Madras	3.6	1.6
Bombay ..	4.7	4.0
U.P.	4.7	5.0
Central Provinces	6.1	0.8
Bihar and Orissa	6.4	3.2
Punjab ..	18.3	9.9

According to the Planning Commission, the consumption of milk and milk products varies considerably in different parts of the country. It is as high as 16.89 ounces in the Punjab and 15.72 ounces in Rajasthan, while in Orissa it is 2.64 ounces only. All the major States except Punjab and Rajasthan are deficient in milk consumption by the standard of 10 ounces per day recommended by nutrition experts.[2]

In determining the minimum *per capita* requirements of the population in the shape of milk and milk products in India, it must be remembered, as we have already stated, that most of the population lives on a vegetarian diet and that milk is frequently the only available source of first class protein. In view of the importance of milk as the source of protein, the quantity necessary per day can best be calculated on the basis of protein requirements. According to European standards, an intake of 100 grams of protein per day, of which one-third roughly should be first class protein, is necessary. Dr. Aykroyd puts the requirements at 65 gram of total protein. Using the two standards for calculating milk requirements, Dr. Wright gives us the following figures:—

	European Standard	Indian Standard
Daily requirement of first class protein per head	37 gms	16 gms
Amount of milk needed to supply this quantity of proteins ..	1,000 gms	430 gms
Or a daily intake of . ..	35 ounces	15 ounces

1 Report, pp. 155-56.

2 First Five Year Plan, p. 280.

It will thus be seen that the minimum Indian requirements are about three times the quantity of milk at present available in the country. The value of milk as a "protective" food should not be lost sight of. It has been said that with a vegetarian diet derived from a very limited variety of foodstuffs, there is a serious risk of deficiency of both minerals and vitamins. An increase in the consumption of milk would correct to some extent the present deficiency of protective elements in Indian dietaries. An increase in production would fail to achieve its object unless the price of milk could be reduced or the income level of the population could be raised.

Drs. Aykroyd and Krishnan, in a paper contributed to the the *Indian Journal of Medical Research*[1] stress the importance of liquid skimmed milk particularly for children. They point out that in the cost of food supplied in Mission Hostel with which they were familiar, whole milk could not be supplied when account was taken of the fact that its cost could not exceed Rs. 3 per child per month. They, therefore, urge the need for popularising the use of skimmed milk products as the cheapest food which could effectively supplement the South Indian diet. They observe that at average South Indian prices, re-constituted skimmed milk would cost about one-third the price of similar quantity of whole milk.

Population and Nutrition Problems

The importance of nutrition research problems has been slowly recognised in India. The cause of malnutrition is undoubtedly to be sought in ignorance, poverty and in the pressure of population on the soil. It may be said that no amount of research in the problems of nutrition—on food values and the causes of deficiency diseases—will enable the poverty-ridden population of this country to obtain a proper diet. But in order to solve a problem it is necessary to study its nature. Knowledge of the nature and short-comings of Indian diet is an essential preliminary to positive measures for improving the diet. The development of agriculture, the nature of the crops to be raised, the determination of the quantity and quality of the cereals, of vegetables and fruits, of milk and milk products required for a balanced diet of the population, in the last resort depend on nutrition research. And if there is to be a social purpose underlying the future food production of India that purpose persupposes the knowledge of diet values.

1 Op. cit. pp. 1093 *et seq*.

Planning Commission and Food

The Planning Commission in outlining their programme of food production concentrate their attention on quantity rather than quality. They observe that the food problem has existed for about two decades, that it is not a temporary disequilibrium beween supply and demand, but that it is a manifestation of the continually growing pressure of population on food supply. The gap between production and requirements, accounting for the growth of population by 1956, they estimate at 7 million tons by 1956 on the basis of 13.7 ounces per adult per day. An increase of 7 million tons of food by 1956 will maintain consumption at the level of 1950. To raise consumption to 16 ounces the additional quantity required will be 15.8 million tons. They propose to raise production, however, by 7 million additional tons of food, by major and minor irrigation schemes, by reclamation of land, by improved manure and fertilisers, and seed distribution. They believe that conditions are not favourable to the smooth functioning of a free market in foodgrains, and they consider it necessary that a policy of price control and building up of stocks by procurement at home and imports from abroad should be continued.

In reviewing this policy we may observe in the first instance that the maintenance of the 1950 level of consumption in 1956 will still leave the population far short of the normal requirements of health and efficiency.[1] Moreover, the calculated increases from year to year will depend upon uniformly favourable climatic conditions and rainfall—an assumption which cannot be accepted with complacency. The target of additional food crops which are expected to follow upon the operation of the major irrigation projects may never be reached, if there is a reluctance on the part of the cultivators to avail themselves of the water facilities, because the rates of water supply are high. Already there is a growing opposition on the part of farmers to pay the increased rates.

The improvement in crop yields due to the supply of fertilisers and seeds depends on proper distribution at a cost within the reach of the farmer. If the supplies to the farmer are to be dependent upon the intermediaries who have an eye to profits

1 A recent F. A. O. report estimates that additional imports of 7 to 8 million tons of cereals, over and above those imported in 1951 and 1952 (4.97 and 3.99 million metric tons respectively) would be required to regain the pre-war supply per head. ("Agriculture in Asia and Far East, Development and Outlook," op. cit, 1953, Part II, p. 4.)

of their own, the enhanced price may make it difficult for the farmer to avail himself of these facilities. The use of mechanised methods of farming, like ploughing through tractors, may aggravate the already serious unemployment or underemployment in agriculture.

The Commission are fully aware of the value of price control in planning. They observe: "The social responsibilities which fall upon a modern State just cannot be discharged without the aid of controls." "A basic requirement of price policy is effective regulation of foodgrains prices." And yet, just because the Central Government has been able to build up a store of 1,000,000 tons, Government announced a free market in grains in July, 1954. Falling prices may be a disincentive to food production, inducing farmers to shift from foodgrains to commercial crops, or to curtail production. Rising prices will aggravate the semi-starvation due to lack of purchasing power. A store of 1,000,000 may disappear in a single year with the vagaries of weather. The lessons of the past seem to have been lost upon our Government at the very time that it concentrates its energies upon all round planning. The rapid tempo of changes in a changing world seems to have infected our rulers who seem to be lost in a whirl of conflicting opinions and advice. To take pride in the thought that we have made ourselves already self-sufficient in food, because of a surplus million tons that we have accumulated is evidently a sign of emotionalism and of a desire to win cheap applause at the cost of reason and foresight.[1]

Concluding Remarks

National food planning during the war has revealed the possibilities of food planning in times of peace, for health and well-being of nations. The industrial manufacture of vitamins at a low cost has come within the range of practical action. In England today pure synthetic vitamin B is being added to refined wheat flour to bring its nutritive value nearer to that of whole wheat. Considerable discussion is taking place in the U.S.A. about the value of fortifying foods with synthetic vitamins. Similarly, elements like calcium and iron can be administered in capsules as an addition to the diet. The cost of production of such synthetic products is even now not very great. A few factories might produce vitamins at a low cost. And if

1 Recently, our Prime Minister, addressing a public meeting at Allahabad observed: "Today India had so much foodgrains that they could meet any eventuality. If unfortunately the crops failed, India would not have to import food grains." (*Bombay Chronicle*, July 12th, 1954).

malnutrition can be tided over by national planning of a balanced diet, any expenditure, however large, can amply repay itself in the health, the efficiency and the revitalisation of our population, equipped for ever greater production, not with a view to accumulating profits in the hands of a few, but for the provision of opportunities for leisure for creative activities and appreciation of the values of life.

Any one who takes an objective view of present conditions in India, will be struck by the fact that with food resources that are inadequate for the needs of a growing population, with an ill-balanced diet, accompanied by a lack of purchasing power due to gross inequalities in the distribution of income, the population of India is a population with a low vitality, liable to succumb even to preventable diseases. With a population inefficient in productive powers, many of them cut off in the prime of life, when their contribution to the national income is at its maximum, with potential resources adequate even for our present overgrown numbers, what we need is a socialised planned economy for our agricultural production, backed by our national resources for the maximum utilisation of our land. Thus alone, we may perhaps be able to bring within the reach of all an adequate and a nourishing diet, saving the masses from the inroads of disease and starvation, and building up with the lapse of time a healthier and a happier generation.

CHAPTER XXXII

PLANNING FOR FUTURE

We have now completed our survey of the main problems that face our country in the fields of production, distribution and consumption. The general impression that we get from this survey is the inevitability of a low plane of living and inefficient production which has been accentuated by lack of an integrated planned policy. The Five Year Plan has been admitted by the sponsors themselves as a first attempt at a planned policy, and falls far short of what a programme of economic development should achieve—the satisfaction of the basic human wants of an adequate living, accompanied by a sense of security, providing the necessary conditions of freedom and leisure for creative activity and a sense of purpose in life. The Plan, at the best, is the dawning consciousness of our new-born government that economic development is

determined to a large extent by the utilisation of the technique and resources of a country for social objectives on an integrated basis.

The last fifty years have seen the advent of a new technology which symbolises modern methods of production by means of power-driven machinery and which converts natural resources into useful goods with less expenditure of human energy than in earlier days. It has forced upon industry the necessity of co-ordinating all operations from the purchase of raw materials to the shipment of finished products. Planning is already an accomplished fact in modern manufacturing plants of private enterprise. The modern age is not so much a machine and a power age as an age of planning. It is, therefore, far from strange that in our times the industrial activities of the nation taken as a whole may be and are organised under national planning with a view to their most effective use, and so as to bring the nation to a high state of sustained production and consumption. We need to do the same constructive work for national organisation as was found necessary for private enterprise, if the benefits of modern technology are to be fully realised.

The socio-economic organisation of our times resting on a basis of capitalism does not permit the continuous employment of those who are able to work, nor their employment in services which would enable them to make their greatest contribution to society. Moreover, under a capitalist system the national income is not distributed to the citizens in such proportions as can ensure a balance of purchasing power with productive capacity. The planning carried out by private enterprise, in other words, fails to provide for the creation of the purchasing power which would ensure the consumption of the goods it could produce. It was assumed that the distribution of purchasing power and the continuous employment of labour would take care of themselves, by the operation of laws of supply and demand. It was not realised that demand has to be effective, determined by purchasing power. Modern technology demands not only planning for production but also planning for consumption.

A nationally planned economy has to determine the objective of planning. It has to take into account the welfare of all the people, and not only the few. It should aim at the most efficient use of all the available resources, as also replacement of and additions to those resources which are renewable, such as land, and above all at providing conditions which will assure to all

persons an opportunity to contribute to the processes of culture and to derive nourishment for physical and spiritual development. Our present processes have not been operating towards these ends. Social conditions are the products of social practices which arise in turn from the institutions of private enterprise seeking profit by hiring human labour. There is nothing sacred about these processes; these are man-made, and based on what one may regard as a false sense of values which national planning might modify and correct.

Looking to the present-day world one finds that instead of the State being regarded as something alien to the people it is universally recognised as an institution that performs functions absolutely essential to the existence of civilised communities in our complex industrial age. One finds three types of States, the democratic capitalist States, like the U.S.A., democratic States with a trend towards socialism like the United Kingdom and Sweden, and the Russian Communist dictatorship. Even Fascist States, like Spain, continue to exist with government regulation of the major part of the economic life of the nation. Will the capitalist State which has failed to solve serious evils turn Fascist, in the hope that dictatorship will offer a way of escape? Or will the Fascist States swing over to democracies, causing a swing in the functions performed by present-day dictatorships? Human history shows the working of the same processes of trial and error to which we are witnesses in the evolution of the processes of life in general.

Under-developed Countries

The problem for India does not differ in essentials from the problem before the rest of the world. Only the methods of approach and the means to be adopted may be different, due to the fact that our country may be classed amongst the under-developed countries of the world. The term "under-developed" has been itself recently evolved after conflict with competitive terms like "backward areas" and "undeveloped countries." The term "under-developed" presupposes the existence of a resource potential which for some reasons has not been realised, whether such potential is technology, capital, skilled labour, management, land or other resources. We also presuppose that development of such undeveloped resources will provide automatically a solution for the population problem, an assumption that may legitimately be questioned. We further assume that such development will result in better nourished, better adjusted and happier populations.

The Planning Commission in our country have been aware of the nature of the dangers that underlie these assumptions, when they observe: "The problem is not merely one of making the existing economic institutions work more efficiently, or making small adjustments in them. What is needed is a transformation of the system so as to secure greater efficiency as well as equality and justice. The central objective of planning is to create conditions in which living standards are reasonably high and all citizens, men and women, have full and equal opportunity for growth and service. We have not only to build up a big productive machine . . . we have at the same time to improve health, sanitation and education and create social conditions for vigorous cultural advance. Planning must mean co-ordinated development in all these fields."[1]

An under-developed country is generally marked

(1) by a low *per capita* income. From a table of *per capita* income of 53 countries in 1939 prepared from various sources in a recent periodical publication,[2] India appears among the last four along with Philippines, China and Indonesia;

(2) by their predominantly agricultural economy;

(3) by the low average intake of calories per day *per capita* of about 2,000 or less in under-developed countries, as compared with over 3,000 in the more advanced countries;

(4) by rapid growth of population, India adding to its population at the average rate of 4,000,000 to 5,000,000 a year;

(5) by a low life expectancy at birth, an average of 30 as compared with 63 in Western countries;

(6) by a lack of adequate savings, due to low incomes, with a resulting low rate of capital formation;

(7) by lack of basic industries, necessitating import of foreign capital goods and by lack of skilled personnel.

The Problem of Developing Under-developed Countries

The assumption, so often made, by highly industrialised countries that non-industrialised people are "primitive", their territories "backward", and that "progress" is moving towards the realisation of ends which industrialised people consider desirable,

1 First Five Year Plan, p. 29. Despite this they have plumped for 'functional planning' in the form of a mixed economy.

2 The *Annals*, March, 1950 (article on Point Four and World Production by H. S. Piquet) pp. 150-51.

is often questioned by the growing nationalism of the non-industrialised countries who resent the implications of their "inferior" culture, and may prove an obstacle to their economic development.

Application of the technology of advanced countries to under-developed regions and assistance to the latter for raising the standard of living of the people, it has to be remembered, is a long process involving solution of difficult problems and adaptation of the technology to wholly new social and economic situations. Such application and aid, in the first place, might end in failure if it does not reach the majority of the people who are producers of wealth. If technical aid remains in the form of reports and blue prints which are not translated into productive techniques adopted by the people, it will be a waste of efforts and resources ending in frustration. Such technology should become part of the economic life of the people of under-developed countries. In the next place, even if the new techniques of production are adopted in agriculture and industry with the help of technical and financial aid, such aid will fail to achieve its purpose if the resulting increase of wealth is not shared by the large mass of the population. "If the building of factories, hydro-electric plants, and irrigation systems, and the use of fertilisers, insecticides and machinery in agriculture only result in increasing the wealth of a small minority of the people, leaving the large majority as poor as they were, technical aid will fall short of its aim to raise the standard of living of the people. In fact, the *per capita* income of an under-developed country may rise, and it may be said that the average standard of living is higher. But unless the higher income *per capita* means a higher standard of living for the majority of the people, the aim of economic development will not be achieved. . . . The rise in national income must express itself in better food, clothing and shelter, better health, better education, and a decent and more active life for the great majority of the people."[1]

Among the factors that may retard economic improvement in standards of life of the people in under-developed countries through the adoption of technical methods is to be included unrestricted breeding. In spite of technological advance rapid multiplication accompanied by medical and health measures may bring about a depression in the standard of living. The occasional pangs of famine may be replaced by constant dull hunger pains.

1 "George Hakim, "Technical Aid from the Viewpoint of the Aid-Receiving Countries," in "The Progress of Undeveloped Areas," Harris Foundation Lectures, (Chicago), 1951, p. 260.

Where social prestige depends upon the number of children and where happiness in the next world depends upon the number of descendants who will offer the proper sacrifices, no amount of birth control and family planning propaganda will affect the birth rate. If the fertility rate has declined in Western countries, the factors responsible for the decline are urbanisation, education and higher incomes. In a predominantly agricultural country, the progress of industrialisation will have to be slow, aggravating thereby the evils of rapid multiplication.

Apart from an overgrown population, economic changes such as the adoption of technological methods involves meet with considerable resistance, as they directly affect a society's culture and its system of values and attitudes. Generally all societies welcome improvement in their economic condition as long as such improvements do not trench upon too many of their customary modes and accepted values. Very often, however, experience of past failures and frustrations makes a society apathetic towards measures of improvement. Thus cultivators, who have realised from past experience that every time their income increases rents and taxes also increase, will not readily accept methods and ways of improvement which originate with their rulers.

In countries where subdivision and fragmentation of land through inheritance prevails, individual ownership and use of mechanical methods become uneconomic and impracticable. Absentee landlordism in under-developed countries where tenants are share-croppers with the landlord is another obstacle to the application of modern agricultural methods, which can only be overcome by fundamental changes in the system of land tenure. Modernisation of methods in cultivation is likely to meet with opposition in countries where the joint-family system is faced with disruption. Foreign experts attempting economic improvement in such countries arouse suspicions already deeply rooted through decades of foreign rule.

It has also been pointed out that as in under-developed countries to procure a steady increase in output with the help of unemployed manpower large investments would be necessary, such investments can only be provided from an economic surplus. Such a surplus is not easily available, if by a surplus we understand the difference between the gross national product and the total essential consumption. Moreover, the will to invest such surplus in productive enterprises, where it exists may be curbed by other factors, like the reluctance to damage their profits

by the creation of additional productive capacity and the absence of suitable investment opportunities.

Apart from these socio-economic obstacles to planning for economic development, there are basic economic problems which we in India have to tackle in common with other under-developed countries. These are: (1) increasing food production by the rationalisation of agriculture and at the same time keeping agricultural prices low, lest the entire developmental programme may be jeopardised by rise in the cost of living; (2) increasing the productivity of labour which involves problems of better nutrition, new technique and adequate incentives; (3) increasing investment without inflation—the problem of scarce capital resources, and deficit finance, and (4) providing employment for a rapidly increasing population.

Five Year Plan—Mixed Economy

The Planning Commission have adumbrated the Five Year Plan for our economic development which is to be carried out within the existing socio-economic structure. The pattern of economy most suited, according to them, to our country is a "mixed economy" which is characterised as democratic planning.[1] It is an attempt at planning on the model of the British Labour Party's planning in England. Can such an economy meet the requirements of an under-developed country like our own? It has to be remembered that our problems are fundamentally different from those of Great Britain. "In Great Britain a mixed economy was based on and made possible by an educated electorate, with a civic sense ready to co-operate with the Government. Great Britain had a growing body of technicians and industrialists ready to lend themselves to basic nationalised industries. It could command capital resources in spite of an exhausting war, not only through a lowered rate of consumption but through the traditional friendly relations with the United States of America. It was not faced with the problem of a huge population living under conditions that sapped the vitality and health of its manpower."[2] Moreover, the implications—social, political and economic—of mixed economy have been completely glossed over by the Planning Commission.[3]

1 The distinction between "democratic" and "totalitarian" planning made by the Planning Commission is hardly helpful in practice, except on the basis of a radical change in human nature.

2 P. A. Wadia, "The Need for a Larger Vision," Annual Address Indian Economic Conference, 1952.

3 For a brief discussion of this, see our "Five Year Plan—A Criticism," op. cit. pp. 18-20.

The Five Year Plan, when viewed as a whole, is a plan of public expenditure in which the emphasis is on the construction of irrigation and power projects, along with provision for transport development. Attention is devoted to increasing the productivity of agriculture by improvement in technique and reclamation of land, but we look in vain for a well-defined plan for rationalisation of agriculture. Large-scale industry, banking and commerce are to be left as hitherto to the private sector, with a saving clause that Government will undertake industrial activities which require capital investment beyond the resources of private enterprise. As regards industries in the private sector, the Plan lays down targets of production which it hopes might be reached under favourable conditions—a pious hope. The Plan stresses the need for a reorientation of outlook on the part of private enterprise, and also stresses the need for controls. The Industries Development and Regulation Act of 1951, amended in 1953, lays down a number of conditions under which industrial development is to take place. The Act of 1951 provides for the establishment and constitution of the Central Advisory Council and Development Councils for industries.

Under the Act all existing industrial undertakings are to be registered, new ones are to be licensed by the Central Government, after proper investigations, and under conditions prescribing locality and minimum standards. Powers are vested in Government to cause enquiries, if any undertaking shows a fall in volume of production, or deterioration in quality, or rise in the price of articles concerned. On the report of such investigation Government may regulate production, require the undertaking to stimulate development and control prices. If such directions are not complied with, Government may authorise any person or body of persons to take over the management of the whole or part of the undertaking for a period not exceeding five years. The rules for issuing licenses for industrial undertakings were revised in 1952 imposing more stringent conditions on such undertakings at the time of application; such applications must show that 60 per cent at least of the capital required has been raised or subscribed, that a substantial part of the buildings has been constructed and that a firm order has been placed for a substantial part of the plant required for the undertaking. Applications for permission for the establishment of a new undertaking are to be referred to a licensing committee which will report after due investigation. The report has to see that the industry satisfies conditions about

its productive capacity, about location, availability of raw materials and of technical and skilled personnel.

Subject to these restrictions imposed by legislation the major field of production is left to private enterprise. Private enterprise, if it is to contribute to increased production needs freedom from restraints and a "fair" field for profits. The Industries Development and Regulation Act hampers the free play of private enterprise. Protests have been already raised against such restrictions. Added to these curbs is the encroachment on profits which progressive labour legislation involves. It is doubtful if even the modest targets laid down by the Planning Commission will be reached, in its endeavour to stimulate production by private enterprise, and at the same time to impose on conditions which imply limitations on the profit motive. As Prof. D. R. Gadgil rightly observes: "The Indian five year plan falls neatly between two stools. It is not prepared to go far enough in the direction of creating conditions favourable for a rapid development through the agency of private enterprise. To do this it would have to reduce much further the burden of direct taxation, dismantle a great deal of its labour legislation and disavow its social aims. For, by doing this alone could present sacrifices be imposed to a sufficient extent on the mass of the people. On the other hand, being wedded to private enterprise, the Indian Government cannot think of a central pool of savings, of centrally directed investment and of a general regime of austerity through direct controls and fiscal devices. The failure to take boldly to one or the other of these lines logically leads to a plan which can accomplish little."[1]

As we have already stated in earlier chapters, a Government that seeks to stimulate production both in agriculture and industries, and yet aims at control in the interests of consumers in a plan that it calls a mixed economy, has to face dilemmas of its own creation from which there seems no way of escape.

The mixed economy, through the implementation of which, the Planning Commission hope to achieve the objective of improving the plane of living of our poverty-stricken masses, rests upon the assumption that an increase in production will automatically be accompanied by better distribution, that a rise in *per capita* income will mean a rise in the plane of living for the masses. There is a further assumption underlying the entire plan that the economic development that is to be achieved will be achieved

1 "Economic Development in India," op. cit., p. 88.

within the confines of the prevalent social and religious beliefs and attitudes. These assumptions have been challenged, both on economic and sociological grounds. There is also the still more vital question: what reactions such a mixed economy have on our general pattern of socio-political order. A mixed economy may end by enthroning dictatorship in the interest of private business. As we have seen, there is already in India a greater concentration of economic power in the hands of industry and big business than in most countries of Europe.[1]

Will economic aid from the West substantially help us in dealing with our difficulties? Will such aid of itself obviate the need for a social revolution which would bring about a shift in the distribution of income and power? The rising nationalism of Eastern countries looks with a natural suspicion upon technical assistance and financial aid from the West as parts of a cold war strategy.[2]

The problem of increasing food production within the price economy has its own difficulties in India. We are faced with the dilemma of a backward-sloping supply curve of agricultural output. Any increase in prices or in production due to improvement in methods may lead to a curtailment in marketable surplus, in a country with a self-subsistence economy.[3] Land reform is associated with improvement in production. But land reform often means a change in the existing system of land tenure. In some cases it may mean consolidation of small holdings into larger units, in other cases the breaking up of large estates into smaller holdings. Smaller holdings—peasant ownership—are not necessarily economically superior to larger holdings. Abolition of intermediaries between the cultivators and the owner is an urgent element of land reforms in India—but beyond this, land reform is a question of alternative methods and techniques to be determined by the nature of the crop, the soil and climate. The pace of land reform has to be much more rapid than what it is today, if it is to be effectively inspiring.

Raising the productivity of labour, again, is a huge task involving the betterment of living and working conditions of labour. A mere rise in wages would not be enough under a system of pri-

1 Cf. "An open field for private enterprise in India thus means essentially a field for the activities of certain groups of financiers and industrialists." D. R. Gadgil, "The Economic Prospects for India," in *Pacific Affairs*, June 1949.

2 In this connection, see an interesting brochure "The Strategy of World Development," *Planning*, no. 327, April 23, 1951.

3 This marketable surplus of agriculture is the fundamental limiting factor upon the pace of economic development in under-developed countries. See Maurice Dobb, "Some Aspects of Economic Development," Occassional Papers No. 3, Delhi School of Economics, 1951, p. 45.

vate enterprise. Labour must feel that it is an equal partner in the productive process. Multiplication of machinery by it self cannot bring about better relations between employer and employed.[1] So also, the need for larger investments in the absence of adequate savings creates the dilemma of resorting to deficit financing and the danger of inflation, or in the alternative keeping down the tempo of development programme, or seeking foreign aid with its dangerous political implications. Moreover, we are faced with the problem of not only providing the necessaries of life, but likewise creating more and more opportunities for employment for a population adding to its numbers from year to year. Planning for large-scale industry will accentuate the problem, as it would be capital intensive.

There is no royal road to an economic millenium—no universal panacea for economic ailments. A blind imitation of Western industrialism will not solve our problems. Referring to the China of twenty five years ago, R. H. Tawney observed: "The disease of young China is its flavour for imitation and in programmes of industrial reconstruction it rages unchecked. . . . An intelligent nation need not copy slavishly the methods of other countries. It will discover in what its own peculiar advantages consist, and instead of merely reproducing what is already done effectively elsewhere will concentrate its efforts on doing what elsewhere is not done so well, or not done at all. China, it may be suggested, will make a profound mistake if she is so much impressed by the industrial achievements of America and Europe as merely to ape them, instead of striking out her own line herself."[2] This warning is more apt in our case even today.

One way of meeting these difficulties that confront us in every direction lies in aiming at a decentralised economy with small units of production, producing parts of every industry and establishing assembly plants on the model of Japan. But the pattern, in such a case, will have to be one of planned co-operative economy with not much room for private enterprise. We shall have

1 Cf. Zweig: "In a Planned Economy the workers must either be enslaved by political, bureaucratic or technocratic rule, or granted a high standard of self-government in industry which would enable them to play a large part in working out and executing the schemes of economic planning." op. cit. p. 140.

2 "Land and Labour in China," 1932. p. 135. Cf. "It is a moot point whether active, democratic citizenship is compatible with working conditions that give the individual no opportunity for creative effort, except in a merely quantitative and money making sense." "I am now speaking not of the fact that the United States, with all its growth of productive power, has not abolished poverty within its borders, but of the tendency to multiply wants and gadgets for satisfying them, and to attach social prestige to gadgetary consumption, without any attempt being made to extend the opportunities for creative endeavour beyond the technicians whose pleasure it is to treat human beings as nearly as possible as if they were machines." "Introduction to Economic History," G.D.H. Cole, 1952 pp. 158-159.

to start with a socialised banking and insurance structure for controlling the financial machinery. Agriculture will have to be transformed into a public utility. But such a plan, however well-organised, may also prove a failure, if in the meantime our population continues to grow at the present rate, if not more rapidly under improving conditions.

In view of our lack of resources, and of the uncertainty, if not the undesirability, of foreign aid,[1] one can only think of a regime of strict austerity not so much on the part of the millions who have not enough to live upon, as on the part of the few who indulge in "conspicuous consumption" with the tacit approval of the powers that be. In the last analysis, all planning for its success has to depend upon the co-operation of the masses, upon the creation and mobilisation of mass enthusiasm. Such enthusiasm is difficult to evoke when our industrialists continue there anti-social activities and our rulers wink at these activities, if they do not truckle with big finance. To ask the millions who live a semi-starved existence to save is equivalent to cutting out of existence a substantial number of them.[2] If the axe is applied to the wealthier classes, it may not bring about any conspicuous change in the condition of the masses, but it may create an atmosphere of confidence and hope amongst them, so urgently needed for the success of the Plan.

Is the creation of such an atmosphere possible in the India of the present day? Is it possible to inaugurate a "new deal" in the sphere of emotions? There is nothing so disagreeable as self-reproach. The search for scapegoats is familiar to all mankind. We may seek an explanation for our economic backwardness in natural calamities, like floods and failure of rains, or in the imperialism of our foreign rulers, or in caste prejudices and communal hatred. Perhaps we might do better if we turned our attention to the canker so deeply rooted in our own national character. Businessmen and industrialists have taken full advantage of the opportunities opened out to them during the war and in the new era of freedom and independence. But the deterioration in character is not confined to businessmen. It has

1 The interesting proposal of Dr. V.K.R.V. Rao for a "United Nations Economic Development Administration" is merely a utopian dream in the existing political climate in the world.

2 The standard of living of the lower income groups leaves almost no margin for reducing their consumption without further impairing their health and efficiency. "It is difficult to believe that a further reduction in the consumption of the lower income groups, even for the purpose of providing resources for the Five Year Plan ....would contribute in a constructive way to the success of the Five Year Plan." Report to the Government of India by a Mission of the International Monetary Fund—"Economic Development with Stability," 1954, pp. 1-2.

overtaken a majority of members of the entire body politic. Our agriculturists, no less than our blackmarketeers, know how to grab what they can. Our politicians and public servants are no less out to look to their own selfish interests than our wage earners. There is no section of the people who do not avail themselves of an opportunity to exploit their neighbours if they can add to their own. There are very few who think in terms of the country as whole, of our nation as members of a single family. Instead of looking upon independence in the spirit of a contrite heart and dedicating our lives to the task of serving our countrymen, we have regarded it as a respite from moral and physical restraints so that we might indulge in individual and group selfishness. And shall we also admit that most of our rulers who are expected to maintain order and promote the well-being of the masses in a spirit of disinterested service seem to have forgotten the simplicity of living preached and practised by our great leader, while offering lip service to his teachings? When freedom was first acquired in 1947 our profiteers and blackmarketeers and tax-evaders thought an end had come to their grab and get operations, but they discovered to their great delight that they had unexpected friends and colleagues. Can it be that a society based on a cash nexus and price mechanism can obliterate in our lives the traditions of service and sacrifice that we inherited from the past?

When piloting the resolution for the acceptance of the Five Year Plan in the House of the People the Prime Minister declared, "We are not out merely to get more money and more production," but "better human beings," he scarcely realised that it was the absence of "better human beings" in the ranks of those who mattered in the implementation of the Plan that might hamper its success. Let us remember that the wisest and most far-sighted of our planners are themselves the products, as much as they are the makers, of the historical process; and a favourable historical environment is as necessary for the success of an economic plan, as it is for the spread of a spiritual message.

Eleven years ago when the Five Year Plan was not yet born we ended our volume in a spirit of optimism, and we do not deem it inappropriate to end in the same vein. For faith can move mountains and where there is life there is hope for the race and the community as much as for the individual.

Though we aim at the growth of a balanced economic existence bringing the means of comfortable living within the

reach of our masses, we need not be false to those ideals of which we have reason to be proud. As in the lives of individuals, so in the lives of nations, there are two types of temperament that sometimes appear in marked contrast. Shall we take the analogy of the bee and the butterfly—a contrast also reflected in the parable of the two sisters of Bethany? Whilst the bee is busy storing money, the butterfly has the leisure to love the lotus. Whilst Martha was busy sweeping and cleaning, Mary chose a different part—that of sitting at the feet of her master. Whilst the orchards and the fields have their value for a hungry humanity, the flower gardens have also their value—not in what they supply for the satisfaction of the body, but in what they are in themselves, enriching human life by their beauty. "Consider the lilies of the field, how they grow; they toil not, neither do they spin. And yet I say unto you that Solomon in all his glory was not arrayed like one of these." The lilies exude an aroma which no toil can produce. They spend themselves for others. We, in the East, have a tradition that fits in with Mary's part. Even the home has to be given up in quest of the Infinite. We recognise our social bonds only in order that through their acceptance they may be transcended. And yet Martha's part is not inferior to Mary's. Martha's work is work for her Lord; if work takes us away from God, it loses its value. Our valuations may be different. The civilisation that fights and conquers the forces of nature, and the civilisation that realises for man the fundamental unity in the depths of existence are not opposed, but complementary to each other. When these contrasted attitudes to life come together in the years ahead of us, humanity will have entered into its heritage. But if India is to contribute its own share in the building up of this larger and better world, it has to do so, and can do so,only if her people are provided with the things that are needed for a many-sided life, only if with a prosperous agriculture and growing industries her people get that leisure and freedom in which the wind can blow where it listeth, and where the creative imagination can be liberated from the limitations of what *is*. We have written this volume in this hope and with this faith; we send it forth in the conviction that, whilst the soil on which we are born may tie us down in return for the material and cultural benefits we have inherited from it, the sky overhead may still leave us free to use this very culture, for the realisation of the human community which is God's Kingdom to whose citizenship we all aspire.

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